Ownership Structure and its Effects on Corporate Financial Policies in Developing Markets: Evidence from Mexican Publicly Traded Companies

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Abstract

Existing research demonstrates that corporate financing decisions influence the cash-flow rights and control rights of the securities issued by companies differently and that the same corporate capital structures and/or ownership patterns have diverse effects and aims across countries, especially when emerging countries are analysed. The 1research purpose of this investigation is to understand how corporate financing decisions are affected by ownership structure in emerging countries. For this purpose, two game-theoretic models are developed and an empirical test is carried out.

The first theoretical model analyses a number of key factors inducing a separation of ownership and control in emerging countries. This model argues that large private benefits of control, extreme risk, low investor protection, inefficient capital markets, and governments sympathetic to incumbent management at the expense of outside investors are factors contributing to create a separation of ownership and control in emerging markets. The second model examines the positive side of network creation through the analysis of the interaction of empathy and economic gains. This model identifies important factors promoting the formation of business groups in emerging countries.

The empirical study is a two-fold analysis. Firstly, it tests the effects of well-known determinants of capital structure on debt; secondly, the effects of ownership and control in the financial policies of emerging countries are analysed. To do so, corporate financial data and firm-level data of Mexican publicly traded companies for was gathered. As expected, asset tangibility, company size, profitability and market to book ratio proved to be important firm-specific capital structure determinants, similar to the case of developed countries. Business risk and effective tax rate are key firm-specific capital structure determinants, as emerging markets research has identified. The two factors proposed by this researcher, viz. consolidation and liquidity are significant in the determination of capital structure of the Mexican publicly traded companies. Further, almost two thirds of Mexican publicly traded companies are family controlled. When families are large shareholders, they favour debt financing;

whereas when families are the majority controlling shareholder they prefer issue shares, the latter supports the risk management argument proposed by Hagelin *et al*. (2006) and Céspedes *et al*. (2010).

List of Abbreviations

ADRs	American Depositary Receipts
AMEX	American Stock Exchange
ASH	Assembly of Shareholders
AT	Agency Theory
BMV	Mexican Stock Exchange (Bolsa Mexicana de Valores)
BG	Business Group
BOD	Board of Directors
BRIC	Brazil, Russia, India and China
CCE	Consejo Cordinador Empresarial
CDS	Consumer Discretionary & Services
CEO	Chief Executive Officer
CLSA	Credit Lyonnais Securities Asia
CMHN	Consejo Mexicano de Hombres de Negocios (Mexican Council of Businessmen)
CMPC	Code of Best Corporate Practices
CNBV	National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores)
CPOs	Certificates of Ordinary Participation
cs	Consumer Staples
CS	Contestable Structure
DJIA	Down Jones Industrial Average
DMs	Developed Markets
EBIT	Earnings Before Interests and Taxes
EDGAR	Electronic Data Gathering, Analysis, and Retrieval system
EMs	Emerging Markets
EZLN	Zapatista Liberation Army (Ejercito de Liberacion Nacional)
FDI	Foreign Direct Investment
FE	Fixed-Effects
FIL	Foreign Investment Law
G-7	Group of Seven

GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GES	Growth Environment Score
GICS	Global Industry Classification Standard
GMM	Generalised Method of Moments
GNP	Gross National Product
ICB	Industry Classification Benchmark
IFC	International Finance Corporation
IFE	Electoral Federal Institute of Mexico
IFIs	International Financial Institutions
IMF	International Monetary Fund
IPC	Price and Quotation Index (Indice de Precios y Cotizaciones)
IPO	Initial Public Offering
ISI	Import Substitution Industrialisation
LA	Latin America
LAPGs	Latin American Populist Governments
LGSM	Mercantile Companies Law (Ley General de Sociedades Mercantiles)
LMV	Stock Market Law (Ley del Mercado de Valores)
LT-B	Long-term Book debt ratio
LT-M	Long-term Market debt ratio
M-M	Modigliani and Miller's research
MNC	Multinational Company
MSCI	Morgan Standard and Capital International
MSE	Mexican Stock Exchange
MT	Market Timing theory
N-11	Next-Eleven Countries
NAFTA	North American Free Trade Agreement
NASDAQ	National Association of Securities Dealers Automated Quotations
NCS	Non-Contestable structure
NPV	Net Present Value
NYSE	New York Stock Exchange
OECD	Organisation for Economic Cooperation and Development
OI	Operating Income

OLS	Pooled Ordinary Least Square
OTC	Over-the-counter Market
PAN	National Action Party
PC	Partially Contestable structure
PO	Pecking Order theory
PPP	Purchasing Power Parity
PRI	Revolutionary Institutional Party (Partido Revolucionario Institucional)
PTC	Publicly Traded Companies
RE	Random-Effects
ROA	Return on Assets
SEC	American Stock Exchange Commission
SMEs	Small and Medium Enterprises
STATA®	Data Analysis and Statistical Software
STO	Static Trade-Off Theory
TA	Total Assets
TB	Total Book Debt
UK	The United Kingdom
US, USA	The United States of America
VC	Venture Capitalist
vc	Vote Capital ratio
WACC	Weighted Average Cost of Capital
WB	World Bank
WTO	World Trade Organisation

Chapter 1

Introduction

A novel emerging research area in corporate finance is the investigation of the effects of the various corporate governance and legal systems on capital market development and corporate financing choices. Researchers have identified that ownership patterns are different in developed and developing economies and that corporate financial structures influence differently cash-flow rights and control rights. La Porta *et al*. (2000) argued that the breadth and depth of capital markets, the pace of new security issues, *corporate ownership structures* and the efficiency of investment allocation are all shaped by the efficiency of legal and enforcement systems across countries. Bebchuck (1999) noticed that the incidence of concentrated and dispersed ownership varies greatly around the world, this being the case even among countries in a similar stage of economic development. For example, in the United States of America and the United Kingdom dispersed ownership is the dominant pattern whereas control blocks are dominant in countries of Continental Europe. Further, La Porta *et al.* (1998) documented that concentrated ownership is the most common ownership structure around the world. Concentrated ownership structures can lead to controlling structures, mainly exerted by families, which are very often present in economies with weak legal and enforcement systems and inefficient markets and institutions.

The investigation of control rights in corporate financing decisions is a fairly new research subject. Early capital structure research focuses on the analysis of the cash-flow rights associated with securities. Jensen and Meckling's (1976) capital structure model, for example, explained how a leverage-increase change (an increase in the manager's equity stake) can align a manager's interest with those of investors, hindering a manager's incentives to divert company funds toward his/her own private benefits. Recent research has identified that financial structure affects both cash-flow rights and control rights. For instance, an increase in a manager's equity stake may increase his/her value adding incentives as he/she has more of the cash-flow rights (as explained by Jensen and Meckling's model), but it may also enable him/her to increase

his/her control rights. This may reduce corporate control and may enable the manager to become entrenched, which may induce *value reducing behaviour*.

Further, it has also been demonstrated that the same corporate capital structures and/or ownership patterns have diverse effects and aims across countries. The divergence of effects and aims may respond primarily to country factors such as: the origin of legal and enforcement systems, economic development, maturity of financial markets and their supporting institutions, culture and the psychology of investors. Glen and Singh (2004) and Booth *et al*. (2001) provided evidence that, in the case of emerging countries, the effects exerted on capital structure by their institutions and country particulars have at least the same impact as all the other determinants together. For example, La Porta *et al*. (1998) suggested that concentrated ownership structures can be a substitution mechanism for coping with lack of investor protection and weak legal enforcement systems. Colpan and Hikino (2010) argued that diversified business groups may be an effective substitute for imperfect capital markets, which typifies emerging economies.

Finally, it has been noticed that during the twentieth century, business group organisation has been the most important form of large enterprises, particularly in emerging markets. According to Colpan and Hikino (2010, p. 16), business groups have remained *'... a core of the large enterprise sector with their characteristic wide and unrelated product portfolio, often combined with the "pyramidal structure of ownership". Moreover, usually families have kept their ownership and control of business groups'*.

Business groups around the world share many attributes, but also vary in some dimensions. Khanna and Yafeh (2007) argue that the differences among business groups are a product of the underlying conditions leading to their formation. These underlying conditions are essentially reflected in their structure, control, ownership and interaction with society. Because of their diverse nature, the ultimate socio-economic effect of business groups is ambiguous. Some business groups have thus proved to be detrimental to the economies, but others have been shown to be welfare-enhancing. Furthermore, there is some evidence of a change in the role/effect of some business groups at different periods of time, according to changes to the underlying

conditions of the environments where they operate. A case in point is that of Mexican business groups, to which the rebound of the Mexican economy after the Mexican financial crisis in 1995 has been attributed by some practitioners and scholars (Castañeda Ramos 2002, 2005 and 2007).

This complex interaction between the factors behind the design of ownership structures in emerging countries and the factors affecting the selection of corporate financing policies is the research subject of this investigation. That is to say, the key research question of this thesis is how corporate financing decisions are affected by ownership structure in emerging countries. In order to investigate this, a theoretical study consisting of two theoretical models and an empirical investigation has been undertaken.

The first theoretical chapter develops a game-theoretic model to examine some important factors that can induce a separation of cash-flow rights and control rights in the ownership structures of emerging countries. The four main factors analysed are: the degree of managerial risk-aversion, the level of private benefits of control, the alignment of the social planners' interests with the incumbent management or the investors, and the efficiency or inefficiency of the financial markets via their irrationality. There are two main contributions of this model to the existing literature on ownership and control in emerging economies. The first contribution is the explicit analysis of two mechanisms of control, the voting rule and the dual-class shares; and the analysis of the incumbent equity stake as a commitment device to exert high effort. The incumbent equity stake depends on his/her degree of risk-aversion. The second contribution is the fact that the findings of this model are documented with four company cases from *Mexico*.

The second theoretical chapter elaborates a game-theoretic model to assess the interaction between empathy and economic gains under two possible economic scenarios (viz. good state of economy and bad state of economy) to identify some factors which promote the formation of business groups in emerging economies. This model demonstrates that: the cost of forming a business group; the probability of a bad economic state occurring; and the level of empathy-enhancement in the bad economic state are all factors at play in business groups formation. The contribution of this

model is its proposal of a theory for business groups' formation incorporating the assessment of a behavioural aspect empathy/trust which is regarded as important in emerging markets. Further, this theory acknowledges the positive or wealth-enhancing side of business groups in emerging markets, something which has been recognised only recently.

The empirical study comprises two stages. The first stage of this investigation investigates the effects of well-known determinants of capital structure on debt. Following Rajan and Zingales (1995) and Booth *et al*. (2001), asset tangibility, company size, profitability, market to book ratio, business risk and effective tax rate are included as proxies for the determinants of capital structure. Then, liquidity and consolidation are also added, aiming to achieve a more accurate approximation of the effects of determinant of capital structure of emerging markets, in particular of Mexican companies. For this purpose, a data set comprising firm-level data of 78 Mexican publicly traded companies is gathered. The second stage of this study assesses the effects of ownership and control in the financing policies of emerging markets. To this end, a second data set comprising firm-level data of 35 Mexican publicly traded companies was gathered. This chapter therefore investigates the effects of the determinants of capital structure in an emerging economy: Mexico. Further, it also assesses the effects of ownership and control on capital structure. Hence, these finding firstly contribute to the general research on capital structure, which has traditionally focused mainly on developed countries. Secondly, they contribute to the existing literature on ownership and control. Finally, the gathering of such a detailed dataset of control and ownership may also be a contribution towards further research.

The rest of this thesis is organised as follows. Chapter 2 surveys the literature relating to the research area. In order to provide a general background, this chapter discusses four subjects, each in one section, which are: ownership structure, capital structure, business groups, and the economic-financial environment and corporate governance practices of Mexico. This chapter begins with the review of the main theories or frameworks regarding: ownership structure and corporate governance, ownership structure and corporate control and ownership structure and legal and regulatory

systems. Later, this chapter discusses the empirical literature and concludes with a revision of ownership structures in emerging countries.

Chapter 3 presents a game-theoretic model regarding the separation of control rights and cash-flow rights in emerging economies, and proves it with evidence from four Mexican company cases. The chapter starts with a brief review of the theoretical framework. Later, it develops the theoretical model, and then a numerical example is provided. This chapter concludes offering a review of the corporate legislation in Mexico and discusses empirical evidence from four Mexican company cases.

Chapter 4 develops a game-theoretic model with reference to Mexican business groups, empathy and market crashes. This chapter begins with a brief review of the theoretical framework. Subsequently, it presents the theoretical model and concludes by offering some final remarks.

Chapter 5 begins with a brief review of the theoretical framework, which comprises a review of measures of capital structure. This is followed by a description of the data and sample selection. Later, the empirical testing of the general determinants of capital structure is presented, followed by the empirical testing for the effects of market power on capital structure. This chapter concludes by presenting the empirical testing of control and ownership on capital structure. Since this investigation was carried out with a second set of data, this section of the chapter starts with a brief review of the theoretical framework, which comprises a review of measures of ownership and control variables. This is followed by a description of the data and sample selection. The estimation strategy for all the models is the static panel model. The statistical software used is STATA version 10.

Chapter 6, the final chapter, discusses the conclusions reached from the analysis of the theoretical models and the outcomes of the empirical investigation. Later, this chapter explains how these findings relate to developments in corporate governance in Mexico. This chapter concludes by mentioning the limitations of the research and identifying possible avenues for future investigation.

Chapter 2

Literature Review

There is a growing consensus that ownership patterns and the financial structure of companies play a very significant role in the creation (dilution) of their value. Financial experts, economists and legal scholars have researched diverse factors interacting in these decisions, aiming to find predictable outcomes from their interplay, and thus identify *"an optimal capital structure"*.

Previous corporate finance and management research has explained how internal factors like corporate charter provisions and corporate governance practices; and external/macro-economic factors, such as: the origin of legal systems, the level of economic development and maturity of financial markets, culture and the psychological behaviour of investors/managers have a strong influence in ownership structures. Corporate ownership structures vary among countries and even among firms; however, there are some identifiable ownership patterns that are typical of developed and emerging economies.

Additionally, the corporate finance theory has been used to assess the capital structure theory over the course of the last sixty years, providing quite contentious but relevant theoretical and empirical findings. In general, *"the optimal capital structure formula*" has not been identified yet, but key findings such as stylised determinants of the corporate capital structures in emerging and developed economies, along with their interplay with the external factors previously mentioned have already emerged.

It is worth noticing that a common empirical finding from both lines of research is that country and company particulars have proved to be at least as important as the standard determinants to their ultimate effect in the value of companies (Booth *et al*. 2001, Chapelle 2005, Klapper and Love 2002 and Wald 1999, among others). Therefore, having taken into account that the focus of this investigation is the Mexican listed companies, which are mainly business groups, it is necessary to conduct a survey

regarding the economic-financial features of Mexico and its governance regulations and practices in order to achieve the aim of this investigation..

The main two purposes of this chapter are: (1) to understand the interplay of ownership structure and corporate financial choices by discussing their foremost theories/approaches; and (2) to contextualise the Mexican listed companies features and practices by examining the features and functioning of business groups and by reviewing the financial-economic environment of Mexico, and its corporate governance regulations and practices.

The structure of this chapter is as follows. This chapter is divided into five main sections: 2.1 Ownership Structure, 2.2 Capital Structure, 2.3 Business Groups, 2.4 The Case of Mexico: Economic-Financial Environment and Corporate Governance Practices and 2.5 Conclusions and Final Remarks.

The ownership structure section is developed by surveying key literature regarding ownership and its interaction with corporate governance (2.1.1), corporate control (2.1.2) and legal and regulatory systems (2.1.3); to conclude with a review of the relevant empirical evidence (2.1.4), giving particular attention to the evidence from emerging markets (2.1.5). The capital structure section begins by discussing the evolution of this research area, firstly in terms of theories (2.2.1) and secondly, in terms of empirical evidence (2.2.2). Later, this section examines the developments and applications of capital structure in emerging markets (2.2.3). The business groups section commences by analysing their main features in both developed and emerging economies (2.3.1) and discussing their particularities (2.3.2). Important findings of the main approaches used when investigating business groups are presented in section 2.3.3. The last theoretical section of this chapter is section 2.4, which is dedicated to investigating the application and effects of the previous theories in Mexico as an emerging economy. This section starts by providing an economic-political background of emerging markets (2.4.1.1) and continues with the discussion of the particularities of Latin America as a specific emerging region (2.4.1.2) in order to build awareness of its cultural influence in the Mexican economy when drawing up and/or implementing economic-politico reforms (2.4.2). Section 2.4 ends with the analysis of the corporate governance practices in Mexico, discussing the main

achievements and the challenges remaining to be overcome, and their possible implications to the Mexican economy (2.4.3). To conclude this chapter, section 2.5 offers some general conclusions and final remarks.

This researcher would like to mention that throughout the text of this thesis the terms markets and economies are used interchangeably, as well as the terms emerging and developing although the latter term is not in use any longer.

2.1 Ownership Structure

It could be argued that the implementation of efficient corporate financing policies results in the difference between success, survival or failure of companies most of the time. Considering the most basic scenario, any financing policy requires the selection of the best financial sources to be invested in the most profitable projects. Keeping things simple, the three main choices are: (1) to use retained earnings, (2) to borrow money via debt instruments, and/or (3) to issue new shares. The second and the third options apply not only to domestic markets but also to international markets.

To be able to make an accurate decision, one has to bear in mind that any security entitles not only cash-flow rights but also voting rights. These might or might not be explicitly written on them, but in any case, these rights are merely inherent to the securities as their actual exercise is affected by factors related to the country and the companies' issuers of such securities. Some examples of these key factors are: the type/tradition of corporate governance, the origin of the legal and enforcement systems, the economic development of the country and its financial markets and institutions, corporate governance practices, culture and the psychology of the investors and managers, among others (Bebckuck 1999, Booth *et al*. 2001, Chong *et al*. 2009, Fairchild and Yuyan 2006, Kappler and Love 2002, La Porta *et al*. 1998 and 1999, Litch 2005 and Lopez-de-Silanes 2002, among others).

Aiming to understand the importance of corporate ownership structure and its interaction with the corporate financing decisions, this section reviews the relationship between ownership structure and corporate governance, ownership structure and

corporate control, and ownership structure and legal and regulatory systems. It concludes with the empirical evidence in this area.

2.1.1 Ownership Structure and Corporate Governance

Corporate governance is an emerging research area but with well-founded underlying theories[1], which broaden its scope making it difficult to capture all its factors/determinants in one single definition without compromising them. Denis and McConnell (2003) and Castañeda Ramos (1999) however have offered two complementing definitions, under different approaches[2], that provide a fair understanding of its main internal and external determinants[3]. On the one hand, Denis and McConnell (2003, pp. 1-2) conceptualised corporate governance as *'…the set of mechanisms –both institutional and market-based– that induce the self-interested controllers of a company… to make decisions that maximize the value of the company to its owners'.* On the other hand, Castañeda Ramos (1999, p.24) describes corporate governance as guidelines that *'…determine the way benefits and business risk are distributed with the intention of reducing conflicting goals and motivating the best effort of the different stakeholders.* Hasan and Jinnah (2009), nevertheless, trying to reconcile both strands describe corporate governance as *'a philosophy and mechanism that entails processes and structure which facilitate the creation of shareholder value through management of the corporate affairs in such a way that ensures the protection of the individual and collective interest of all stakeholders'* (p.50).

Aiming to advance the analysis of these determinants in order to improve the current understanding of corporate governance, Gillan (2006) proposed a detailed framework that depicts ten of the main factors surrounding corporate governance. These ten factors were classified into two general categories namely, the internal-factor category

[1] The theories underlying corporate governance include disciplines such as finance, economics, law, management, accounting, organisational behaviour and behavioural finance, among others (Mallin, 2007).

[2] Dennis and McConnell (2003) assume that the priority of companies is to increase the wealth of its shareholders, whereas Castañeda Ramos (1999) prioritises the interests of all stakeholders instead.

[3] By internal determinants it is meant the factors and mechanisms developed inside of companies that regulate their governance. External determinants refer to those factors and mechanisms developed by external entities, which regulate companies.

and the external-factor category. The factors included in the internal-factor category were: board of directors, managerial incentives, capital structure, bylaw and charter provisions, and internal control systems. The factors forming the external-factor category were: law and regulation; capital markets; market for corporate control and labour and product markets; market for information and analysis of capital markets; markets for accounting, financial and legal services; and private sources of external oversight. In the same spirit, Miguel *et al.* (2005) identified five different institutional determinants characterising corporate governance systems around the world. These determinants were the legal protection of investors, the effectiveness of boards of directors, the level of ownership concentration, the development of capital markets, and the market for corporate control.

Since corporate governance is defined/modelled by the mechanisms, policies and practices that aim to bring about the best functioning and fairest allocation of corporate resources, it is important to distinguish the leading participants in the framework that the company uses to operate. In other words, to determine whether the company focus is a shareholders framework or a stakeholder framework. According to Mallin (2007) the main difference between the shareholder framework and the stakeholder framework is that the former has as its main objective to maintain or enhance shareholder wealth, whereas the stakeholder framework aims to maintain or enhance social welfare, which not only includes the shareholders' benefits but also the benefits of outsiders, such as employees, customers, suppliers, creditors and the local community in general.

2.1.2 Ownership Structure and Corporate Control

The idea that *'... the potential for conflicts of interest between owners and controllers…* [arises] *when ownership and control of corporations are not fully coincident'* (Adam Smith 1776, cited by Denis and McConnell 2003, p. 1), seems to be the cornerstone of the conflicting relationship between ownership structure and corporate control. Empirical evidence suggests that this inequitable relationship frequently ends in private benefits for controllers, which are mostly at the expense of

minority shareholders and company value. There are different theories explaining the selection of corporate ownership structure and their effects on corporate control. The following review aims to survey the main research in this area.

Initial research in corporate ownership and control examines the effects of differences in cash-flow rights and voting rights. For instance, Grossman and Hart (1988) proposed that the relevance of a corporate security-voting structure relies on its applicability as a mechanism for shifting corporate control. Further, the assignment of voting-rights might determine both the type of party that will have control –*'high-private benefit party or high-security benefit party'*– and the value of income claims under the controlling management. The main results of Grossman and Hart's (1988) study propose that a one-share one-vote rule is a superior corporate strategy for maximising security benefits, as it fosters the selection of the most efficient management. However, this rule does not always maximise the value of shares. In other words, a one-share one-vote rule is shown to be the dominant strategy when either an incumbent's private benefits or a rival's private benefits are insignificant. It is a neutral strategy when the private benefits of both parties are insignificant, whereas it might be a non-optimal strategy when both private benefits are significant. Moreover, this study also shows that the determination of a majority rule for takeover bids becomes important when the one-share one-vote rule is not present. These results hold when considering two different sorts of controlling benefits: security benefits and private benefits[4]; dual classes of shares, both being widely held; and also the fact that any shareholder is considered to be pivotal.

Harris and Raviv (1988) emphasise that governance rules affect share value. This might be because governance rules influence the proportion of private benefits to be extracted from the winner contestant by shareholders in the takeover bidding process. Harris and Raviv (1988) analyse the optimality of both various assignments of votes to shares and the simple majority rule in two different contexts: corporate value and social welfare, in order to determine the winner of control contests. The major results of this analysis, which agree with the findings of Grossman and Hart (1988), show that

[4] According to Grossman and Hart (1988), security benefits are those mainly represented by the total market value of corporate income streams, whilst private benefits are those enjoyed only by the current management. Some examples of the latter are synergy benefits, prerequisites of control and diversion of resources from security holders, in extreme cases, among others.

one-share one-vote rule combined with a simple majority rule work as an optimal social[5] governance scheme. Thus, under one-share one-vote rule, shareholder property rights are fully protected since value-reducing bids are not possible. However, when considering corporate value, extreme shares[6] might maximise the aggregate value of the shares issued, since they allow choosing the winner contestant to extract her/his private benefits of control. Further, supermajority rules result in better rivals being defeated by worse incumbents, whether or not one-share one-vote rule is present. The opposite results would be the outcome when sub-majority rules are applied. Finally, when there are multiple classes of shares, inferior rivals may defeat better incumbents, even with a simple majority rule. Important assumptions in this analysis are: investors are considered to be small but not infinitesimal[7]; investors might become pivotal when their votes are sufficiently close to the winning edge; and there is initial trading among investors, which might end in the cash-vote ratio of investors' portfolio. This cash-vote ratio is important because it might influence the determination of the winner. It is noteworthy that the last assumption presupposes a strong legal system that would not allow any security trade separating cash flow claims from voting rights.

In addition, Stulz (1988) examines the effects of voting rights and financing policies on corporate value. Stulz (1988) argues that the proportion of the voting rights controlled by the management might be a key element in the ownership structure of publicly traded companies. This is because this proportion directly affects the value of companies. The main results from this analysis propose that shareholder's wealth increases or decreases when management strengthens their control. In other words, company value is positively related to low voting rights held by the management, whereas company value is negatively related to voting rights as the latter becomes large. Further, an increase in the proportion of the voting rights held by the management will decrease the probability of a successful tender offer, increasing the premium offered. Moreover, this analysis also shows that management can modify the proportion of voting rights held, not only by selling and buying shares, but also through different mechanisms such as capital structure changes, corporate charter

[5] According to Harris and Raviv (1988) optimal social means that the total share value is maximized, hence the best rival/contestant always wins.
[6] Extreme shares are a dual class of shares in which one class has all the claims to cash flows while the other has all the voting rights.
[7] Considering investors to be a small helps to incorporate the effects of large-investors.

amendments, and acquisition of shareholders clienteles, among others. All these mechanisms affect company value due to their effects on the proportion of voting rights held by the management. A particular feature of this analysis is that the results are explained in terms of a positive probability of succeeding in a takeover bid, rather than the gain to be obtained in the case of winning. This might be because outside shareholders are considered to be atomistic[8]. Finally, this analysis also assumes a one-share one-vote rule, a simple majority rule and a risk-averse management with limited resources.

A different approach is presented by La Porta *et al.* (1999), who argue that the type of commercial law/code ruling countries, depending on its origin[9], strongly determines the ownership structure of companies. In other words, their argument proposes that ownership structure might act as a substitution mechanism when lack of investor protection and low degrees of law enforcement are present, i.e. widely-held companies have shown to be more frequent in common law countries than in civil law countries.

Additionally, Bebchuck (1999) develops a rent-protection theory of corporate ownership structure, based on the *'contestability'*[10] of control, which is reflected in the selection of a dispersed or a concentrated ownership structure of corporate votes and shares. This theory acknowledges not only the importance of legal systems, but also the existence of incentives and opportunities for controlling shareholders to both benefit from and expropriate minority shareholders, when determining the corporate ownership structure. Furthermore, Bebchuck's theory helps the understanding of the current ownership patterns worldwide and within countries. He groups these patterns into three different classes of ownership structures: the non contestable (NC), the contestable (C) and the partially contestable (PC) structures. In the case of the NC structure, control is locked as there is a high concentration of shares. In contrast, the C and the PC structures allow the appearance of a potential rival, who might try to take control from the incumbent against his or her will. This situation is possible because these two structures are dispersed ownership structures of votes and shares.

[8] The main feature of atomistic shareholders is that they cannot collude, thus they cannot force a higher premium (Stulz 1988).

[9] The four most common commercial systems by their origin are: common law, civil law, German system and Scandinavian system.

[10] Meaning by contestability *'... that a rival can seek to wrest control from the incumbent against its will'* (Bebchuck 1999, p. 1).

This theory demonstrates that when private benefits of control are large, initial shareholders might prefer to set up controlling ownership structures, although a dispersed structure would offer efficiency advantages. It is also shown that in this case, dispersed ownership structures might be an unstable equilibrium[11]. Additionally, when private benefits are substantial and a controlling ownership structure is established, separation of cash-flow rights and voting rights would tend to be implemented. This separation can be achieved through different special arrangements such as dual-class of shares, cross-listing shares, and pyramid structures among others. These arrangements are used because they allow a lock on control to be maintained without incurring large liquidity and/or risk costs, although they might produce important agency and/or tax costs. Furthermore, this theory proposes that controlling shareholding structures should be more common in countries where private benefits of control are large, whereas dispersed ownership structures should be more frequent in countries where private benefits are small. To arrive at this proposition, Bebchuck (1999) contrasts the index of legal protection[12] with the *premia* paid for control blocks, concluding that in countries where legal systems do not offer good levels of investor protection, higher private benefits of control seem to predominate. In other words, controlling structures seems to be a product of inefficient legal systems. Therefore, it is possible that *'... a corporate law system that effectively limits private benefits of control can produce more efficient choices of ownership structure'* (Bebchuck 1999, p. 0).

Following the same line of inquiry, Burkart and Panunzi (2006, p. 2) emphasise that *'the impact of legal rules on the relation between ownership concentration and monitoring intensity are not uniform but depends on how legal rules interact with monitoring'*. Burkart and Panunzi (2006) analyse the interaction between monitoring and managerial incentives in the relationship between legal protection and ownership concentration. To this end, they propose a risk neutral model that allows for two types of moral hazard. The first type regards the managerial effort needed to be exerted in order to find a new project. The second type relates to the possibility that the manager

[11] This is because raiders would gain control of companies with dispersed ownership at low prices and extract these benefits of control.
[12] The legal protection index is built by La Porta *et al.* (1998).

expropriates the proceeds from the project rather than distributes them to shareholders. Important considerations in this model are that shareholder control comes with costs and benefits and that there is a managerial private-benefit extraction, which is subject to legal and monitoring constrains. Additionally, this model assumes that large shareholders and the management are distinct parties, outside ownership concentration is determined by the trade-off between managerial incentives and shareholders control and ownership is fully dispersed in regimes with strong legal protection.

Two major results from this analysis are that, firstly, legal rules and monitoring might be not only considered as substitutes but also as complements. Hence, when legal protection and monitoring are considered substitutes, the relationship between legal protection and ownership concentration might be non-monotone. This is because better laws weaken the monitoring incentives. Conversely, when legal protection and monitoring are considered complements, ownership concentration and legal protection would be inversely related since better laws might strengthen the monitoring incentives. Further, it is shown that better legal protection may worsen the conflict of interest between large and small shareholders. Secondly, this analysis documents that the limitation of private benefit extraction might increase shareholder control by discouraging managerial incentives. In other words, to maximise net shareholder return, it would be optimal either to curb monitoring or to offer a higher wage or a bonus to the manager. Moreover, Burkart and Panunzi (2006) document that the ownership structure and the bonus are chosen to solve the dual moral hazard problem of providing incentives and limiting managerial expropriation, where the optimal mixture of the first two components depends on the quality of the law. Therefore, in general, good legal protection might result in dispersed ownership and in private benefits to be complemented with a bonus to satisfy the manager's incentive constrain. Conversely, low legal protection might need concentrated ownership, which increases monitoring, to curb private benefits expropriation.

Finally, Burkart *et al.* (2003) present a model of succession in a company owned and managed by its founder. This model examines the costs and benefits of delegating management through the possibility of expropriation from outsiders who are professional managers. The model proposes that the interaction of monitoring costs

and legal investor's protection with amenity benefits[13] might influence the founder decision to remain managing the family company or to appoint a professional manager to do it. In this model, the two dilemmas to be solved by the founder are whether to separate management from ownership and how to split the ownership of the company if going public.

Key assumptions in the development of this model are: family management is generally inferior to professional management in terms of profitability. The professional manager is financially constrained, whereas the founder is not. This model does not consider any risk aversion parameters, thus, neither the founder nor the professional managers are risk averse. All kinds of law governing corporate activities and investor protection are important. This means that firms would have no opportunities to improve investor rights through their bylaws, corporate charters or contracts. This last statement, however, seems to deny some empirical evidence that suggests companies may ameliorate investor protection by amending their corporate charters and bylaws[14].

The results of this model suggest that both law and monitoring might reduce managerial expropriation; although the size of amenity benefits, when extreme, will drive the decision to keep together or to separate management from ownership. In contrast, when the size of amenity benefits is moderate, the interaction of monitoring costs and the quality of investors' protection will influence that decision. Further, this model also shows that the previous statements broadly hold in two different scenarios. These are firstly when there is no collusion and secondly when there is collusion between the founder and the professional manager to expropriate minority shareholders, the second scenario being more complex. The complexity of this situation is based on the incompatibility of collusion with monitoring costs when amenity benefits are moderate. This is because when both amenity benefits and the protection of investors are intermediate, there is no optimal level of monitoring leaving rents to professional managers. Finally, investors' protection and concentration in ownership seem to be negatively related. This means that concentrated ownership

[13] This term refers to *'non-pecuniary private benefits of control, meaning utility to the founder that does not come at expense of profits'* (Demset and Lehn, 1985 cited by Burkart *et al.* 2003 p. 2168).
[14] See for example Bebchuck 1999, Klapper and Love 2002, Lopez-de-Silanes 2002 and Chong *et al.* 2009, among others.

might go together with weak legal protection, which implies that '[t]*he separation of ownership and management is an indication of superior corporate governance environment;* [whereas] *the lack of such separation and the prevalence of family firms is evidence of financial underdevelopment'* (Burkart 2003, p. 2193).

2.1.3 Ownership structure and Legal and Regulatory Systems

A classic approach to dealing with the relationship between legal systems and ownership patterns is the one provided by La Porta *et al.* in 1998. They argue that the ownership structure of companies might be closely framed by the origin of legal systems. Furthermore, ownership concentration might become a substitute for legal protection, as only large shareholders can hope to receive a return on their investments. This can be explained when considering the security rights granted to their holders as the defining feature of those securities. Nonetheless, these rights should not be considered as inherent in securities since the former seem to depend on the regulations of the jurisdiction where the securities are issued.

In order to identify the role of legal systems in corporate governance, La Porta *et al.* (1998) empirically examine whether legal systems, in terms of the rights granted to shareholders and creditors[15] and the level of law enforcement[16], differ across countries[17]. After this examination, they analyse the main effect of those differences in corporate governance systems.

[15] Regarding shareholders' rights, there are three different categories for the variables examined, which are: voting powers, ease of participation in corporate voting, and legal protection against expropriation by management. Related to creditors' rights, the categories of the variables are: the respect for security of the loan, the ability to grab assets in case of a loan default, and the inability of management to seek protection from creditors unilaterally.

[16] The measures examined to determine the quality of the law enforcement are: the efficiency of the judicial system, rule of law, corruption, risk of expropriation by the government, and the likelihood of contract repudiation by the government (La Porta *et al.* 1998).

[17] La Porta *et al* (1998) built a database which embodies important aspects of the legal rules and the quality of enforcement of those rules in 49 different countries that have at least five domestic and completely publicly traded companies in 1995. The countries are: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Denmark, Ecuador, Egypt, Finland, France, Germany, Greece, Hong Kong, India, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Kenya, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, The Philippines, Portugal, Singapore, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Kingdom, United States of America, Uruguay, Venezuela and Zimbabwe.

It is worth mentioning that the classification of legal systems used by La Porta *et al.* (1998) identifies four groups, which are common law countries, French-civil law countries, German law countries and Scandinavian law countries. This classification is based on the following variables:

> *'…(1) historical background and development of legal systems, (2) theories and hierarchies of sources of law, (3) the working methodology of jurist within the legal systems, (4) the characteristics of legal concepts employed…, (5) the legal institutions of the system, and (6) the divisions of the law employed within a system'* (Glendon, Gordon and Osakwe 1994, cited by La Porta *et al*. 1998).

A key finding from this analysis is that legal regulations and their level of enforcement vary significantly across countries. Further, these variations can be comprehensively explained taking into account the origin of legal systems. La Porta *et al.* (1998) reported that French-civil law countries present the lowest levels of protections to both shareholders and creditors and of law enforcement. Conversely, common law countries offer the highest level of protection to shareholders and creditors, while the German and the Scandinavian law countries fall between these two groups. Regarding the quality of law enforcement, German law countries appear to have the best level of enforcement, while Scandinavian law countries almost reach those levels. Common law countries present better levels than those of French-civil law countries. Additionally, La Porta *et al.* (1998) propose that legal systems might affect corporate governance, and therefore, companies may adapt to the possible limitations of those systems. Possible ways of coping with poor legal systems include implementing substitute rules, by means of remedial mechanisms, such as high ownership concentration[18], mandatory dividend policies, and legal reserve requirements, among others. Finally, the empirical evidence indicates that French-civil law countries are the ones where most remedial rules are enforced.

[18] The analysis of the ownership concentration was performed with the five largest companies of each country of the sample, considering the threshold of the three largest shareholders.

Continuing with this line of inquiry, La Porta *et al*. (2000) perform a complete analysis of the effects and consequences of legal protection to investors[19] in corporate governance. Three important remarks are contained in this work. Firstly, La Porta *et al*. (2000) emphasise that legal protection to investors might be not only a key determinant of corporate governance, but also a closely related factor to corporate finance. This seems to be the case because different legal systems provide investors with different rights to avoid expropriation from insiders. This may, for the most part, end in differences regarding corporate ownership concentration, dividend policies, development of financial markets and company's access to external finance.

Secondly, La Porta *et al*. (2000) propose that the legal approach provides a more complete explanation concerning the differences in corporate governance systems than the bank-centred and market-centred approaches. Under the view of Bank and Market centred governance, either banks or financial markets are the main providers of finance and governance, which overlooks the fact that both institutions could be completely developed or underdeveloped. Therefore, this approach provides an incomplete view. On the other hand, the legal approach acknowledges the judicial and historical explanations of legal systems, which are based on the differences in the legal philosophies of those systems, and in the political and historical differences that shaped them. That is to say, the legal approach incorporates the legal protection granted to investors. Based on the legal approach, La Porta *et al*. (2000) suggest that civil law may be associated with greater government intervention in economic activity and weaker protection of private property than common law. Finally, La Porta *et al*. (2000) explain that the exercise of good corporate governance practices might enhance economic development. Further, an efficient reform in corporate governance needs to take into consideration the rights to be granted to investors, although this may require radical changes to legal systems.

On the other hand, Gilson (2005) proposes that law, in terms of its functionality, may play a better role in classifying corporate ownership into efficient and inefficient controlling shareholder systems, rather than into widely-held and controlling ownership structures. Thus, countries considered to have an efficient controlling

[19] This study considers both outside shareholders and creditors as investors, while both managers and controlling shareholders are considered as insiders.

shareholder system, that is countries with functionally good law, may support both controlling and widely-held ownership structures. However, countries with an inefficient controlling shareholder system, that is countries with functionally bad law, may only support controlling ownership structures.

Gilson (2005) develops a novel theoretical frame of the controlling ownership structure, in terms of the trade off between monitoring and private benefit extraction, to understand the actual patterns of corporate ownership. Gilson (2005) argues that law, legal efficiency, politics and country particulars are basic factors in the analysis of corporate ownership patterns. In relation to this, Gilson (2005) argues that law might have an important role in corporate ownership that may result in different costs and benefits, instead of contending that different[20] laws may end in specific ownership structures. In other words, according to this perspective, controlling shareholder structures can occur in countries classified[21] as common law and as civil law countries, as in the case of the U.S. and Mexico, but can result in different costs. Moreover, Gilson (2005) suggests that to analyse the effects of private benefits of control[22]in corporate ownership patterns may offer a more complete explanation of these patterns as these benefits may incorporate the effects of the particulars of each country. The latter might include the quality of shareholder protection, legal enforcement and politics, among others.

Finally, Gilson's analysis seems be supported by the following empirical facts. Firstly, most public companies (apart from North American and British companies) seem to have controlling ownership structures that most of the time do not correspond to their cash-flow holdings. Secondly, either law and legal efficiency or politics appear to have failed to provide an accurate rationale of corporate ownership patterns. This can be noted as some controlling ownership structures are present in countries with good law and/or in countries without a remarkable social democratic affiliation.

[20] The classification of laws established according to their legal origin.
[21] This classification corresponds to the legal origin of their legal systems.
[22] According to Gilson (2005), private benefits of control can be pecuniary and non-pecuniary.

Additionally, Licht *et al*. (2005) argue that considering legal systems to be the main determinant of corporate governance might bring deficient findings[23], whereas culture[24] may offer a more complete answer. Nevertheless, both determinants together, culture and legal rules, might provide a more accurate account of worldwide corporate governance regimes since corporate governance laws can be seen to systematically relate to the prevailing culture.

Licht and co-authors' study focuses on the analysis of litigation over voting rights as a means for dealing with conflicting economic interests in the corporation. To this end, Licht *et al*. (2005) adopt the cross-cultural psychology view, contrasting the key dimensions of culture derived from the two leading theories in this field[25]. From this analysis, Licht *et al*. (2005) propose a new framework to group and analyse countries based on the similarities in their cultural profiles to cope with conflicting economic interests in corporations. This framework consists of six categories: English-speaking, West European, East European, Far Eastern, Latin America and African countries.

The main results of this study highlight both the adequacy of considering culture, in terms of the societal acceptance of litigation, as a salient determinant of corporate governance and the appropriateness of culture to be operationalised to test hypotheses. Additionally, this study suggests that the content of formal legal rules should be compatible with and partly reflect the prevailing cultural orientations in a society. Further, cultural orientations may persist in the face of formal legal reforms. These previous contentions are supported by the main statistical results from this study, which show that greater reliance on concrete legal rules enforceable in the courts may be stronger in nations high on the Schwartz cultural orientation of mastery and low on harmony orientation. This is because these cultural features could be comparable with

[23] The main limitation may be that the findings provided by these studies are based on shareholder rights rather than investor rights, which excludes any analysis of creditor rights. Therefore, the general superiority of statutes in common law countries for protecting investors (meaning both shareholders and creditors) may be vague (Licht et al. 2005).

[24] Culture, according to Licht et al. 2005, refers to the complex of meanings, symbols, and assumptions about what is good or bad and legitimate or illegitimate that underlies the prevailing practices and norms in a society.

[25] On the one hand, there is a theory developed by Schwartz in 1994 in his work entitled "Cultural Dimensions of Values: Toward an understanding of National Differences, in Individualism and Collectivism", which suggests embeddedness/atonomy, hierarchy/egalitarianism and mastery/harmony as three main bipolar culture value dimensions. On the other hand, Geert Hofstede (1991) proposes that individualism/collectivism, power distance, uncertainty avoidance, and masculinity/ femininity may be major bipolar elements for characterising culture.

giving power to investors and encouraging them to fight for their rights. Additionally, investor legal rights may be stronger in nations high on the Hofstede individualism dimension and low on the uncertainty avoidance dimension. Finally, this study provides evidence that societal acceptance of litigation may be significantly related to a heritage of British rule.

A counter argument regarding the appropriateness of strong legal systems to enhance corporate performance is that proposed by Fairchild and Yiyuan (2006), which suggests that, in venture capital contracts, strong legal systems may be value-reducing. This *"reversed"* effect may be the result of tough legal systems destroying empathy between the entrepreneur and the venture capitalist (VC), and, consequently, reducing their incentives to exert cooperative efforts. It is of note that because of the characteristics of venture capital contracts, implicit relationships between VCs and entrepreneurs may be considered more important than legal systems in achieving higher corporate results.

Fairchild and Yiyuan (2006) develop a double-sided moral hazard model[26] in order to analyse the relationship between legal systems, the strength of venture capital contracts, and the post-investment performance of the venture. This psychological game-theoretic model is innovative as it incorporates not only an empathy sub-game, but also allows for the interaction between the effective sympathy level, the culture closeness and entrepreneurial penalty parameters. Further, this model also considers policy implications, providing a discussion of the particular case of Chinese ventures. In general, the main results of Fairchild and Yiyuan's model propose that tough contracts might be value-maximising for ventures in jurisdictions with highly effective legal systems and low cultural closeness. Conversely, soft contracts might be effective for ventures ruled by highly ineffective legal systems and high cultural closeness. In the case of China, this model suggests, despite the empirical evidence, that soft venture capital contracts would be optimal, as it has been argued that China may have a weak legal system but a high cultural closeness.

[26] This is a double-sided moral hazard model because it considers that both venture capitalists and entrepreneurs contribute to the success of a venture, as both contribute to the wealth creation.

Important assumptions in this model are: the selection of the sympathy levels is sequential and starts with the entrepreneur's choice; there are two possible levels of sympathy[27]; and control and empathy[28] are substitutes.

2.1.4 Empirical Survey

Initial empirical research in the USA regarding the relationship between ownership and control suggests that corporations were dispersedly held and controlled by professional managers who did not account for the ownership structure of those companies (Berle and Means 1932, cited by La Porta *et al.* 1999, p. 471). However, the opposite facts seem to portray a fairer contemporary overview of the ownership concentration and the protection of minority rights of companies worldwide. This latter statement is based on the outcomes of the classic research on corporate governance[29] carried by La Porta *et al.* in the late 90s. The main findings of this study demonstrated that many large companies have controlling shareholders, except for those companies based in countries with high levels of minority shareholders protection, which were more widely held. Families or the State typically controlled the former companies, whereas financial institutions seldom exerted equity control on them. Controlling shareholders participated actively in the management of those companies. Further, controlling shareholders typically had control over companies in excess of their cash flow rights. The pyramid was the mechanism most extensively used to separate cash-flow rights from voting rights. It is noteworthy that dispersion of ownership, which appears to go together with good shareholder protection, seemed to drive the results of this research.

To arrive at these conclusions, La Porta *et al.* (1999) carried out two kinds of tests where the definitions of ownership used relied on voting rights rather than on cash-

[27] The level of sympathy can be either full sympathy equals one or non-sympathy equals zero.
[28] In this model, control provides a measure for the effectiveness of a society's legal system and empathy measures the society's culture of trust (Fairchild and Yiyuan, 2006).
[29] The countries that are part of the sample are: Argentina, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, South Korea, Mexico, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, The United Kingdom, and The United States of America. These countries were chosen according to their GDP in 1993.

flow rights. The first class of test was carried out to determine the quality of the legal protection[30] that countries offer to minority shareholders. The second class of test was performed to determine the frequency of controlling shareholders[31] in different countries and their identity.

Additionally, Nenova (2003) argues that the value of control-block votes might be an important part of company value and it varies across countries. Nenova (2003) carried out an innovative cross-country analysis[32], which measured the value of control-block votes (taken together) in terms of private benefits. Nenova (2003) reported two major results of this analysis. On the one hand, the value of control-blocks votes was significant in magnitude and varied across countries[33]. Furthermore, control-block votes looked significantly less valuable in a strict legal environment than in a lax legal environment. On the other hand, salient determinants of the value of control-blocks votes might be legal environment, law enforcement, investor protection, takeover regulations and power-concentrating corporate charter provisions, as they explained 68% of the cross-country variation in the value of control-block votes.

Nenova (2003) proposed two different interpretations of these results. The first one highlighted the large effect of law in the value of control-block votes, supporting La Porta *et al.*'s (1997) findings regarding the effects of legal systems in corporate ownership structure. In other words, Nenova's results (2003) demonstrated that French civil law countries presented the highest median value of control-block votes (22.6%), while common law and Scandinavian civil law countries scored the lowest, with 1.6 and 0.5% respectively. These figures can be explained under the intuition that weaker laws reduce expropriation costs so encouraging higher control benefits, which

[30] The indices used to determine the quality of the legal systems (investor protection and level of law enforcement) were those built in the article 'Law and Finance' by La Porta *et al.* (1998).

[31] For this purpose, the general procedure followed is to assess the percentages of voting rights, both direct and indirect altogether, per shareholder. The parameters are 20 and 10 percent. On the one hand, 20 percent of voting rights is established as this percentage is usually considered enough to have effective control on a company. On the other hand, a more conservative view of control proposes 10 percent of voting rights as standard.

[32] The study examines 661 dual-class firms in 18 different countries. The countries were chosen according to their market capitalization volume as of 1995 and the availability of this information in the DATASTREAM database. The countries forming the sample are: Austria, Australia, Brazil, Canada, Chile, Denmark, Finland, France, Germany, Hong Kong, Italy, Korea, Luxembourg, Mexico, New Zealand, Norway, South Africa, Sweden, Switzerland, Turkey, The United Kingdom, and The United States of America.

[33] For instance, in Scandinavian and Anglo-Saxon countries the value of control-block votes is close to zero, whereas in Mexico it accounts for almost 36% of company market value.

in turn increase the value of control-block votes. On the other hand, taking a more conservative view, these same results could be also interpreted as the effectiveness of a refined legal framework in protecting minority shareholders' rights. It is of note that Nenova's (2003) results were reported after being adjusted for takeover probability, block-holding costs, and dividend and liquidity differences between the share classes. Finally, these results hold when measuring the total value of all votes composing the control block, assuming dual-class and widely held companies, a simple majority rule and a competitive control market.

Acknowledging the current magnitude of indirect ownership and its effects, Chapelle (2005) proposed a linear input-output matrix to calculate the separation between ownership structure and control by determining the integrated (direct and indirect) ownership shares in a set of companies. Chapelle (2005) used this input-output matrix to compute the *'separation ratio'* of the Belgium firms and contrasted her results with the existing findings for Italy, The Netherlands and The United States of America.

2.1.5 Ownership Structures in Emerging Countries

In the case of the emerging markets, current research is focussed on identifying the main features of the ownership structures existing in this kind of countries and their functioning. For instance, emerging countries have shown highly concentrated ownership structures and a great difference between cash-flow and voting rights (La Porta *et al.*, 1999; and Silva *et al*. 2006). This divergence from the one-share one-vote rule may be mainly achieved through the use of pyramid and/or cross-holding ownership structures; the issuance of different classes of shares, including non-voting shares; and the application of super majority rules.

Carvalhal da Silva and Câmara Leal (2006) analyzed the control and ownership structure of Brazilian firms[34]; and the effects of voting and cash-flow rights on the valuation and on the performance of those firms. The main results of this analysis

[34] Financial and Non-financial institutions listed on the Sâo Paulo Stock Exchange in 1998, 2000 and 2002.

showed that concentrated ownership is a very common feature of Brazilian companies, while most of them are controlled by a single direct shareholder. Further, there was a discrepancy between voting and cash-flow rights namely, 1.69 percent on average in 2002. This seemed to be achieved by the use of indirect control structures such as pyramids, shareholders' agreements, and non-voting shares. In other words, on average, 77 percent of these companies had an indirect ownership structure and 45 percent of their shares were non-voting shares, while the percentage of outstanding shares was around 47.

Carvalhal and Câmara's analysis documented that, in general, the valuation and performance of Brazilian firms were positively related to cash-flow concentration and negatively related to both voting concentration and to the separation of cash flow and voting rights. However, it is of note that Brazilian firms with controlling shareholders showed relatively higher valuation and performance levels than those of Brazilian firms with non-controlling shareholders.

Silva *et al*. (2006) investigated the effects of business group affiliation, giving special attention to the ownership-control structures and to the role of family ties and interlocking directorates, on the economic performance of Chilean companies[35]. In general, their results documented that Chilean firms have a high concentration of ownership and control[36]. Additionally, most of these firms belonged to business groups (114 out of the 117) and had an average interlocking of directors of 56 percent and family ties of 22 percent. Chilean firms affiliated to business groups were shown to be larger, to have smaller Tobin's Q and to generate a higher return on assets than those of non-affiliated firms.

Moreover, Silva *et al*. (2006) found a cubic relationship between performance, ownership concentration and business affiliation[37], with break points at 21 and 76 percent. That is to say, at both low and high levels of ownership concentration (below 21 percent and above of 76 percent, respectively) performance increased, while at medium levels (between 21 and 76 percent) performance decreased significantly. It is

[35] The sample was formed of 177 non-financial Chilean companies that traded in 2000.
[36] On average, controlling shareholders held 53 percent of the economic rights, but 65 percent of the voting rights.
[37] Business affiliation is analyzed in terms of family ties and interlocking of directorates.

of note that these values were consistent with the critical values of ownership stated by Chilean law. Finally, Silva *et al.*'s findings suggested that the effect of social ties on firms' performance mainly depended on the concentration of voting rights and on the kind of the social tie. In other words, performance may be further increased by social ties when there was a low concentration of voting rights, and even more when there was a concentration of economic rights. Finally, in general family ties showed a positive impact on performance, whereas interlocking of directors may exert a negative impact.

Finally, Klapper and Love (2002) analysed the relationship between law, corporate governance and performance in fourteen different emerging countries at company level[38]. To carry out this examination, Klapper and Love (2002) contrasted different indices regarding country-level measures of the existence of the law[39], the effectiveness of its implementation[40] and the legal environment[41].

This investigation brought up two main findings. Firstly, the empirical evidence of this analysis showed that the overall degree of company-level governance is strongly positively related to country-level measures of investor protection, although there is considerable variation at company-level governance within countries. Secondly, the imperfections of contracts, the asymmetry of the information, and the particular characteristics[42] of companies were significant determinants of governance at company level. In other words, legal systems and the degree of law enforcement might be key determinants of corporate governance. However, when measuring governance at company level, a firm's particular characteristics proved to be relevant. Klapper and Love (2002) therefore argued that companies might have some flexibility in improving their levels of corporate governance by adding charter provisions that enhance the

[38] The sample of this study consists of 374 companies in 14 emerging countries, which are: Brazil, Chile, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, The Philippines, Singapore, South Africa, Taiwan, Thailand and Turkey.
[39] Law existence is mainly measured by the Shareholder Rights Index, established on the basis of the work of La Porta, Lopez de Silanes, Shleifer, and Vishny in their Law and Finance paper.
[40] The efficiency in implementing law is measured by the Judicial Efficiency Index. This index is provided by the International Country Risk Guide in 2000.
[41] The Governance Index captures the entire legal environment. This index is built with the first six categories of the governance indices provided by the Credit Lyonnais Securities Asia (CLSA) report of April 1991.
[42] Some examples are: growth opportunities, asset composition, firm size and issuance of ADRs among others.

protection of investors[43]. In this regard they found that good governance practices were more meaningful, in terms of corporate performance and market valuation, in countries with *weak* shareholder rights and *inefficient* law enforcement than in countries with *strong* shareholder rights and *efficient* law enforcement.

Regarding the relationship between performance and corporate governance, Klapper and Love (2002) found that, at firm level, better corporate governance was positively related to better operating performance and market valuation. Further, this relation became statistically more significant when country fixed effects[44] were included. Additionally, they showed that firm levels of governance might outweigh the country-level effects of legal systems when determining market valuation.

It is of note that Klapper and Love's (2002) investigation is important because it provided corporate and country evidence of the behaviour of corporate governance in emerging economies, which, unlike rich economies, are characterised by more concentrated ownership and weaker legal environments.

[43] Some useful provision should be related to the appropriateness and timely disclosure of the financial information, to the selection of independent boards, and to the application of disciplinary mechanisms to avoid the expropriation of minority shareholders rights, among others.
[44] The country effects, which are mainly concerned with legal effects, are encompassed by the indices of judicial efficiency, shareholders rights and legality.

2.2 Capital Structure

Capital Structure can be defined as *'*[t]*he mix of the various debt and equity capital maintained by a firm'.* Capital structure is also called financial structure because it represents the composition of corporation's securities used to finance its investment activities (Ross *et al*. 2002, p. 919).

2.2.1 Theoretical Survey

A transcendent study on Capital Structure is the irrelevance model published by Modigliani and Miller in 1958. Modigliani and Miller's (M-M) research findings *(expressed as propositions)* brought a whole new view to this field. In 1958, M-M claimed that the type and proportion of the securities (i.e. debt instruments and equity shares) used to tap a company were irrelevant since the value of its outstanding securities would remain unaltered. This statement is known as the M-M proposition I or *'the irrelevance proposition'* (Modigliani and Miller 1958). In other words, *M-M proposition I* contends that the value of a company will always be the same under any capital structure. This proposition lies on the strong assumption that capital markets are complete and without imperfections such as corporate and personal taxes, bankruptcy costs, information asymmetries and agency costs, among others. However, since *this ideal world* where capital markets are perfect and complete does not exist, Modigliani, Miller and many other financial economists widen their research to incorporate not only the analysis of the market imperfections overlooked, but also of other factors (e.g. country features, culture and psychological behaviour of managers, among others) that may influence the selection of the capital structures.

According to Barclay and Smith (2005) most of the current capital structure theories focus their analyses on any of the following three factors: ***(1) taxes, (2) contracting costs, or (3) information costs***. It is important to remember that even when these theories may predict different or rather opposite outcomes, this does not mean that they are mutually exclusive from each other.

M-M proposition II analyses the effects of **taxes** on the capital structure of companies, pointing out the economic benefit that could be achieved if debt were included into the capital structure of the company. Its addition may lower the expected corporate tax liability, and consequently, increase the earnings (cash) after taxes (Modigliani and Miller 1963). *M-M proposition II* was the first framework mentioning the debt benefits of tax shields. However, this proposition assumed a risk-free debt scenario, which may lead to the belief that 100 percent of debt financing would be the best capital structure option. In the view of the *M-M proposition II*, the value of a levered company might equal that of an identical unlevered company plus the present value of the interest tax shields. The latter represents the contribution of debt financing to the market value of the company. A flaw with this analysis, however, is the possible overestimation of the tax advantages caused by overlooking the effects of financial distress. Further, in 1977, Miller evaluated the effects of personal and corporate taxes in capital structure. His analysis asserted that these effects result in the equilibrium of aggregate supply and demand for corporate debt, in which personal income taxes paid by the marginal investor in corporate debt just offset the corporate tax saving. DeAngelo and Masulis (1980) extended Miller's work demonstrating the effects of tax shields other than interest payments on debt**,** such as non-cash charges.

Consequently, a more sensible framework would be one that takes into account not only the advantages of debt, for example: the benefits of tax and no-tax shields, but also its costs such as the ***contracting costs*** including the expected financial distress costs (or underinvestment problem) and the direct and indirect[45] costs of bankruptcy. In other words, a theory where the optimal debt-equity ratio reflects the point where the marginal costs of debt just offset its marginal benefits (Jensen 1986).

Therefore, taking into account both the benefits and costs of debt, it is expected that the company value would be maximised by debt financing as long as this does not exceed the *optimal corporate debt-equity level* because once exceeded, debt financing would no longer be at risk-free rate. In consequence, debt issuance will increase the average cost of capital (WACC), reducing the company's value. In general, this

[45] Barclay and Smith (2005, p. 10) mentioned that *'...* [f]*or many companies, the most important indirect cost is the loss in value that results from cutbacks in promising investment when the firm gets into financial trouble.'*

scenario is analysed by the Static Trade-Off theory (STO), which assumes that there is a target level of debt to which companies move towards in order to maximise the company value. This target level is the result of a number of company factors, such as profitability, asset type, business risk; and also a number of institutional factors like the bankruptcy code and tax code (Booth *et al*. 2001). All in all, this argument proposes that too much debt may cause the expected financial distress costs to increase further than the debt benefits. This would leave companies with the possibility of experiencing underinvestment problems. Nevertheless, too little debt financing may result in an excess of free-cash-flows which may favour overinvestment behaviour (Myers 1977 and Jensen 1986).

In this regard, underinvestment can be understood as the circumstance in which companies (mainly *high-growth* companies having problems with their debt servicing and whose value is primarily given by intangible investment opportunities) might choose to miss positive investment opportunities in order to avoid/limit wealth transference from investors to creditors due to the high expected financial distress costs. Conversely, overinvestment could be the propensity of corporate managers to invest the excess cash-flow generated in activities leading to growth at the expense of profitability, such as diversification projects either in the same core business or worse in unfamiliar business (Myers 1977). This situation has been identified mainly for mature companies with large cash-flow generation and low investment opportunities.

Focussing on the effects of ***informational costs***, there are at least three notable theories suggesting that it is possible to achieve *'an optimal'* corporate capital structure. These theories are: *the Market Timing (MT) theory, the Signalling theory and the Pecking Order (PO) theory*. All of them share the premise that corporate managers might have more and better information about the company than outside investors.

In corporate finance, the *Market Timing* theory assumes that managers might tend to '*time'* their stock offerings, favouring the issue of overpriced securities but avoiding (or limiting, at least) the issuance of undervalued securities. This is because managers are thought to be concerned about ongoing investors so they would like to prevent the dilution of the value of existent shareholders' claims. In other words, the MT theory expects that companies experiencing high equity valuation might show low levels of

leverage, whereas companies whose equity price is undervalued, might show high levels of debt. This appears to be the case since equity value is more vulnerable to corporate announcements than debt securities value, since the value of debt securities is fixed. Managers, therefore, believing that the company has profitable investment options, but undervalued stock, would favour debt financing. On the other hand, equity financing might be preferred if the stock is considered to be overvalued. However, there may also be some other companies tempted to issue overvalued securities even though they lack a specific profitable investment opportunity. This makes the reasons for and the signals of this behaviour less clear. For example, Baker and Wurgler (2002, p. 1) mentioned that managers might like *'...to exploit temporary fluctuations in the cost of equity relative to the cost of other forms of capital'* if they believe that the equity market is inefficient or segmented.

As a result of this kind of behaviour, and bearing in mind that managers might have a better knowledge of the company than outside investors do, the market (investors) seems to have decoded those signals offering a systematically negative response to most leverage-reducing transactions[46], whereas a positive stock price reaction is given to most leverage increasing transactions (Barclay and Smith 2005 and Jensen 1986).

The *Signalling theory* is very similar to the previous framework as both are developed around the idea that managers possess better corporate information and corporate knowledge thereof, than outside investors. The Signalling theory suggests that the company's market value depends on the perception of its return streams. Consequently, changes to these streams might alter the market valuation of the company, even though its corporate financial structure does not change (Ross 1977). In other words, in addition to presuming managers have better information than outside investors, the Signalling theory also considers that corporate financing decisions are designed primarily to communicate managers' confidence in the future financial performance of the company and to promote a rise in the shares' market value when managers believe that the company is undervalued (Barclay and Smith 2005). However, because investors know that not all corporate information is widely

[46] Barclay and Smith (2005) pointed out that recent empirical literature shows that overpriced or underpriced companies issuing new equity showed a drop in their stock prices at the time of the equity offering announcement. Nevertheless, the drop was very slight for companies considered to have promising growth opportunities.

available and that managers are the ones who have the most access and knowledge of this information, they seem willing to trust corporate announcements only if there might be significant consequences associated with misleading the market.

Consequently and as previously mentioned, debt financing has been recognised as a successful signalling device because it obligates companies to make a fixed set of cash payments over the term of the debt security. Furthermore, the failure to comply with these payments can result in severe consequences, including bankruptcy. Therefore, the Signalling theory predicts a high market valuation for most leverage-increase transactions, but a low market valuation for most leverage-decrease transactions (Jensen 1986).

In addition, keeping the asymmetric information argument while elaborating on the analysis of its informational costs, there is a theory suggesting that the capital structure of companies should be driven by the preference to be financed by the funds internally generated instead of by external financing (Myers 1984 and Myers and Majluf 1984). This theory is known as the *Pecking Order* theory (PO). It explains that external financing might always generate costs, and that these costs will largely vary according to the market perception of the future corporate profitability (following the asymmetric information argument), and to some extent, to its growth opportunities. As a result, the PO theory presumes that the optimal corporate capital structure is given by a financing hierarchic order rather than a target level of leverage. In view of the PO theory, therefore, a company might be able to maximise its value (since the transaction costs will be reduced) by systematically selecting internal financing (e.g. retained earnings) rather than external financing. It could also do this by choosing the less risky external sourcing (i.e. issuance of debt rather that equity) when internal financing would no longer be sensible. The PO theory thus predicts low debt ratios for companies with few investment opportunities but substantial free cash-flows. On the other hand there would be high debt ratios for high-growth companies with low cash-flows, as result of the reluctance to issue equity. It is noteworthy that this prediction is the opposite of the tax and contracting arguments.

Finally, bringing back the argument of debt as a disciplinary instrument, the capital structure has also been explained under the perspective of the ***Agency Theory (AT)***.

As defined by Jensen and Meckling (1976, p. 308), an agency relationship is a contract under which *'...one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent.'* Thus it seems sensible to think that if both parties would like to maximise their own utility, the agent (managers) may have incentives to act for their own benefit at the expense of the principal (investors). Therefore, it might be rather difficult for the principal to ensure that the agent will make optimal decisions from the principal's viewpoint at zero cost[47].

Consequently, the AT can be defined as the framework that analyses the main conflicts of interest between corporate managers and their agents frequently generated by the payout policies of cash to shareholders (Jensen and Meckling 1976). This theory assumes that shareholder's payoffs might reduce managerial power because they decrease the resources under managerial control. Accordingly, managers might have an incentive to promote company's growth beyond its optimal size as this growth/expansion might help them to recover some power or give them some pecuniary compensation, as result of the increase in the resources under their control. For example, even though external financing such as common equity might generate substantial agency costs of managerial discretion, this type of financing might be valuable for companies with strong investment opportunities and with managers and investors pursing the same growth objective. However, the opposite might be the case if a company does not have a strong investment opportunity because then debt might have served to limit the agency costs of managerial discretion.

In other words, the AT proposes that an optimal capital structure might be achieved by trading off the agency costs generated by the potential conflicts of interest between inside and outside investors against other transaction costs. This is for the reason that the distribution of the future cash-flows of a company might be linked to its capital and ownership structures. For example, Barclay and Smith (2005) pointed out that the use of debt rather than equity might help to reduce what economists call the agency cost of equity or *'... the reduction in value that arises from the separation of ownership and*

[47] Some examples of agency cost might include *'... the cost of structuring, monitoring and bonding a set of contracts among agents with conflicting interest, plus the residual loss incurred because the cost of full enforcement of contracts exceeds the benefits'* (Fama and Jensen 1983, p. 327).

control in large, public companies with widely dispersed shareholders' (Barclay and Smith 2005, p.11). However, this advantage of debt financing seems to hold for mature companies with low investment opportunities in the sense that the concentration of equity ownership looks facilitated. However, for high-growth companies with few/no cash-flows available, this agency cost advantage might be over weighed by the risk-sharing benefits from expensive outside financing.

It is worth noting that even though all the aforementioned capital structure theories were framed using both company and institutional factors[48], it seems that the product market field was not the focal point in any of them. Research on capital structure and product market structure can be considered as incipient, and its vast majority seems to have been developed assuming that managers generally have incentives to maximise output rather than profits or total value. Two salient perspectives that have been used to address the effects into the corporate financial policies and product market are: (1) the strategies used by companies competing in the product market and; (2) the effects resulting from the product/input or product/input market characteristics, both considering debt as a bargaining device (Harris and Raviv 1991).

In general, it could be said that the aim of the research related to product market strategy (also known as product market competition) is to analyse how leverage might change the payoffs to equity, altering the equilibrium product market strategies. The goal for research on capital structure and the product or input characteristics might be the identification of the characteristics of the product (input) or of the product market (input market) that significantly interact with the debt levels (Harris and Raviv 1991). Initial work in this first branch of research proposed that, using a Cournot-equilibrium model, oligopolistic companies might favour debt financing[49] even though it will increase their business risk, because these companies might opt for a more aggressive output policy (Brander and Lewis 1986 in Harris and Raviv, 1991). In Cournot oligopoly models leverage acted as a commitment device for producing more, as

[48] For example, the **STO theory** proposes that the target level of debt to which a company moves towards in order to maximise its value is the result of its asset type, its profitability and some transaction costs, besides the institutional factors like the bankruptcy code and tax code. Similarly, the capital structure under the **PO theory** is driven by the interaction between the company investment opportunities, its profitability and some market imperfections like information asymmetries.

[49] This is based on the Jensen and Meckling (1976) argument explaining that increases in leverage may induce equity holders to pursue riskier strategies.

companies had strong incentives to produce large outputs because this might cause their rival companies to produce less. Consequently, in equilibrium both companies would choose a positive level of debt, being worse off in this equilibrium than if they were in an all-equity Cournot equilibrium as, with leverage, companies produce more than the Cournot output. Furthermore, it has also been shown that when oligopolies persist over time, tactic collusion might be possible through the use of punishment strategies triggered when a rival deviates from the collusive output level (Harris and Raviv 1991).

The main idea behind research related to product/input or product/input market characteristics seems to lie in how the costs of products or product market unavailability might affect stakeholders (i.e. customers, suppliers, workers, *et cetera*), bondholders and investors; and also the bargaining game between management and its suppliers. In the first scenario, Titman (1984) suggested that the capital structure can be used to commit the shareholders to an optimal liquidation policy which might acknowledge the costs of liquidation imposed on stakeholders (i.e. a price raise for product or product market unavailability or uniqueness) and then transferred to stockholders by means of a price reduction. In other words, it is expected that companies will only default if there are some liquidation proceeds after considering (absorbing) the liquidation costs imposed on stakeholders. Conversely, shareholders would never wish to liquidate, while bondholders might prefer go into liquidation whenever the company is in bankruptcy. Therefore, companies experiencing a substantial effect because of the characteristics of its product or product market, such as those offering unique products/services or durable goods, are expected to have less debt than those companies producing less specialised products/services or non-durable goods.

The second scenario proposed that debt might serve as a bargaining-strengthener device for shareholders when dealing with (input) suppliers (Harris and Raviv 1991). The reasoning here is that in a bargaining process between a levered company and its suppliers, bondholders endure the largest share in case of failure or a small share in case of success. Thus, an increase in leverage might extend the shareholders' threat point in negotiations with suppliers. As a result, debt might help to increase company

value and its levels will depend on the bargaining power and/or market alternatives that companies have.

All in all, according to the maximisation hypothesis of the output and the shifting-risk[50] argument of the agency theory, a positive relationship between debt financing and market structure is expected, an outcome similar to the tax-shield theory, the agency theory, and the signalling theories predictions. Nonetheless, it is of note that there might be some boundaries to the levels of debt given by the product and market characteristics, such as uniqueness or availability/unavailability of the product or service.

2.2.2 Empirical Survey

Empirical international research (heavily dominated by USA research at the beginning) has corroborated that capital structure decisions might be framed by the aforementioned determinants (taxes, bankruptcy costs, agency costs, information asymmetry costs, product market, and patterns of ownership, among others); along with others like country particulars and the psychological behaviour of investors, which seem to have very complex effects on them.

Graham (2000) analysed the effects that corporate tax benefits exert on corporate financial policy and company value. His analysis used a simulation reporting analysis that accounted for the following two assumptions: companies do not pay taxes on all stages of nature, and there is a possibility that companies carry-back and carry-forward the tax-loss provisions. Green and Hollifield (2003) revealed that, at corporate level, personal-tax advantages from raising equity (distributing cash through repurchases) may be larger than those from raising debt (distributing cash through dividends or taxes) when tax shields can be uncertain or redundant. They also found that personal-

[50] The replication of the *"shifting-risk argument"* in this context could be as follows. One may imagine a scenario with shareholders and lenders as the principal and agent parties, respectively. In this context shareholders may have incentives to increase debt financing to finance risky projects since lenders will receive the payment of their interest and principal if the project succeeds, while shareholders will appropriate the residual income. Nevertheless, if the project fails, the lender will endure the loss. It is of note that business risk and financial distress costs are somehow overlooked.

tax advantages from raising equity are not enough to offset the tax advantages from raising debt when payments to debt are fully deductible.

Regarding **bankruptcy costs**, Baxter (1967) demonstrated that these are nontrivial costs since it is possible to obtain an optimal capital structure when the tax advantage of debt is traded-off against the likelihood of incurring bankruptcy costs. Altman (1984) argued for the importance of indirect and direct bankruptcy costs, providing some empirical evidence where the sum of both costs[51] were sufficiently large to give credibility to an optimal capital structure based on the trade-off between gains from leverage-induced tax shields and expected bankruptcy costs. Branch (2002) analysed the different classes of bankruptcy-related costs categorising them into four different areas and measuring their impact on the optimal capital structure. The four areas are: real costs borne by the bankrupt firm, real costs borne by the claimants, losses to the bankrupt firm that are offset by gains to other entities, and real costs borne by other parties.

Concerning **agency costs**, Jensen and Meckling (1976) argued that distribution of cash flows provided by firms may depend on their ownership structure. Even in a world without taxes, it might be possible to find an optimal leverage once the significant agency conflict between outside shareholders and managers is solved, as a result of the separation of ownership and control. Titman (1984) acknowledged that an agency relationship exists not only between stockholders and bondholders, but also between the firm and its customers or between the firm and its employees.

In relation to **asymmetry information**, Myers and Majluf (1984) performed an empirical analysis of the firm's financing and investment decisions through a signalling model. They stress that asymmetry provides managers with incentives to issue overvalued securities, although the market anticipates this and reacts negatively to security issuance. It also provides incentives to issue debt when securities are undervalued. Boyer *et al.* (2003) demonstrated that information asymmetry may not affect product differentiation. This result contrasts with the main literature on signalling, which stresses that information asymmetry has a non-negligible impact on

[51] The total (direct and indirect) cost of bankruptcy amounted about 15% of pre-distress firm value for industrial firms and around 7% for retailers.

strategic behaviour. In this analysis, Boyer and co-workers used the model of spatial competition under mill pricing and quadratic transportations costs.

Rajan and Zingales (1995) verified whether capital structure's determinants of US public companies are similar to capital structure's determinants of public companies from countries financially comparable to the United States e.g. the Group of the Seven (G-7)[52]. This study relies on the analysis of four factors which are: tangibility of assets, market-to-book ratio, size and profitability. It does this while considering the effects of the differences in accounting practices[53] and the different legal and institutional environments. The main result of this research shows that at aggregate level, the G-7 companies hold similar levels of leverage, with the United Kingdom and Germany being relatively less levered. Further, institutional factors such as tax and bankruptcy codes, the role played by banks and by security markets, the patterns of ownership and the market for corporate control; may influence the extent to which firms are levered by country. Finally, Rajan and Zingales (1995) suggest that a more appropriate difference between bank-oriented countries and market-oriented countries may be their election for public financing (stocks and bonds) or private financing (bank loans), rather than the amount of leverage held by their companies.

In the same line, Wald (1999) investigated the role of **institutions and agencies** on capital structure's determinants in developed countries. Wald's analysis (1999) uses a one-year[54] cross-country sample formed by five developed countries. These countries are: France, Germany, Japan, the United Kingdom and the United States of America.

This investigation avows that institutions and agencies may be also important determinants of capital structure. To this end, Wald (1999) assesses the effects of the characteristics of eight firms on corporate financial decisions according to the view of moral hazard and agency theories. The characteristics analysed are: risk, physical property and equipment, inventories, research and development expenses,

[52] The countries embraced by the G-7 are: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States of America.

[53] Rajan And Zingales identified the following practices as the main sources for accounting differences. The type of balance sheet reported in terms of individual or consolidated; the method used for valuating assets i.e. historical cost or current value; and the items/entries reported in the balance sheet such as: financial leases and pension liabilities, among others.

[54] The year of the financial data is either 1991 or 1992. This depended on the latest data provided by Worldscope database by the time of this study.

depreciation, profitability, sales growth, and size. The results of this study show that, although leverage seems to be very similar between these countries, institutions may be considered as a salient capital structure determinant as these vary the effects of other determinants on corporate financial decisions. Some of these variations are obtained when risk, profitability, size and/or growth are analysed.

Miguel and Pindado (2001) provided some evidence of both firm's characteristics[55] and Spanish institutions[56] being key determinants of corporate capital structure in Spain. To this end, Miguel and Pindado use different theories of capital structure such as tax, financial distress, static trade-off, pecking order, and free cash flow theories to explain the behaviour of the previous determinants. The sample of this study is formed by all non-financial Spanish firms quoted on the Spanish Stock Exchange from 1990 to 1997.

The novelty of this study lies in three facts: it provides evidence of a non-G-7 country that is Spain. Secondly, it develops and empirically tests a dynamic target adjustment model, where the optimum debt level is a linear function of the determining factors of capital structure. Further, this model is calibrated using a two-step Generalised Method of Moments (GMM). Finally, it contrasts the effects that the main Spanish institutions may exert on their corporate financial decisions in two possible environments, one with information asymmetries and one without them. The main results from this study are as follows. Spanish companies rely more on private debt[57] than on public debt since public debt has been shown to be more expensive due to the underdevelopment of the Spanish bond market. Further, although the transaction costs of the Spanish firms adjusting their debt ratio to their target-debt ratio are high, these costs look inferior to those borne by US companies. In addition, under asymmetric information there is an inverse relationship between the levels of debt and cash flow. This may confirm the pecking order theory, which appears to be reflected in the under-investment problem. In contrast, in the absence of asymmetric information there is a direct relationship between the levels of debt and cash flow. This may corroborate the

[55] The firm characteristics analysed are: taxes, assets, cash flows, free cash flows and investments.
[56] The institutions explored are tax code, bankruptcy laws, public and private debt, and patterns of ownership structure.
[57] Private debt may help in lessening agency problems because managers are more aligned with investor's interests. In contrast, public debt may provide fewer financing constrains.

free cash flow theory and the over-investment problem, thereof. That is to say, firms may issue debt to avoid managers carrying on with negative present value projects. Finally, Spanish companies have been shown to have concentrated ownership structures, which help to reduce the cash-flow problem previously described.

Sogorb-Mira and López-Gracia (2003) also analysed the financial structure of Spanish companies, but they focus on small and medium enterprises[58] (SMEs). Sogorb-Mira and López-Gracia (2003) argue that both the pecking order and the trade-off approaches may contribute to explain theoretically the financial policies of Spanish SMEs. This study shows some evidence of Spanish SMEs attempting to achieve a target leverage, but scant indication of these firms adjusting their leverage level according to their financing requirements.

Menéndez-Alonso (2003) suggested **diversification in the product market** as a determinant of firm capital structure. Nevertheless, this study does not find a significant relationship between firm leverage and the degree of diversification of the Spanish manufacturing firms. This contrasts with the results from previous studies of American and Australian markets that suggest a positive relation based on coinsurance effects and transactions costs. Conversely, Singh and Nejadmalayeri (2004) demonstrated that international diversification strategy positively associates with higher total and long-term debt ratios for French Multinational Corporations, since it reduces the overall cost of capital despite higher equity risk.

Korajczyk (2003) assessed how **macroeconomic conditions and firm-specific factors** may change the determinants of capital structure over time and across firms. The main result from this study reveals that in financially unconstrained firms leverage varies counter-cyclically with macroeconomic conditions. Conversely, in financially constrained[59] firms leverage varies pro-cyclically.

Hatzinikolaou, *et al.* (2002) analysed the effects of **inflation uncertainty** on a firm's debt-to-equity ratio. They propose that inflation might be considered as a significant

[58] The sample comprises 6482 small and medium Spanish companies during the five year period 1994-1998.
[59] Theoretically, a financially constrained firm is one which does not have sufficient cash to undertake investment opportunities and faces severe agency cost when accessing financial markets.

determinant of capital structure. This is because inflation uncertainty diminishes the debt-to-equity ratio and causes a loss of value to the firm's stockholders. Furthermore, inflation has a pervasive effect on capital structure budgeting decisions, which reduces the number of projects financed by issuing debt.

2.2.3 Capital Structure in Emerging Countries

Initial research on capital structure in emerging countries suggests that their corporate financial decisions are influenced by similar factors to those in developed countries. However, in the case of emerging countries, the effects exerted on capital structure by their institutions and the particulars of each country may have at least the same impact of all the other determinants together (Glen and Singh 2004 and Booth *et al*. 2001).

Booth *et al.* (2001) examined the determinants of capital structure in emerging countries. They investigated the role of some macroeconomic variables i.e. development of security markets, real GDP growth rate and inflation and tax rates. They also studied the role of some institutional factors i.e. tax rates and business risk, on corporate financial decisions in emerging countries. The sample of this study comprises the largest public companies of ten emerging countries[60] during the period 1980 to 1990.

Booth *et al.*'s investigation presents evidence that capital structure decisions are affected by the same determinants in both developed and emerging countries[61]; although some signs and/or the size of some coefficients appear to be different from what may be expected. Further, there are persistent differences across countries suggesting that specific country factors are at work. In other words, under their model, in terms of total debt ratio, country effects explain around 43 percent of the corporate financial decisions, while financial variables alone explain between 40 and 43 percent. Important findings regarding debt are that emerging countries seem to have lower

[60] These countries are: India, Pakistan, Thailand, Malaysia, Turkey, Zimbabwe, Mexico, Brazil, Jordan and Korea.
[61] Total-debt ratios decrease with the tangibility of assets, profitability, and the average tax rate and increase with size (Booth *et al*. 2001, p. 115).

levels of debt than those held by the G-7 countries. Further, the difference between the total book-debt and the long-term ratios looks greater in emerging than in developed countries. This may be the result of emerging countries being largely tapped by short-term debt and trade credit. Moreover, profitability is shown to be highly and negatively correlated to debt. This could be due to the substantial agency and informational asymmetry problems that these countries encounter, besides the underdevelopment of their long-term bond markets. Moreover, business risk and the market-to-book ratio are important factors when analysed in isolation, as they tend to be subsumed within country dummies. Finally, main outcomes concerning macroeconomic effects suggest that, in general, debt levels vary negatively with inflation and equity market capitalisation, but positively with real economic growth and the proportion of liquid liabilities to GDP. In the case of institutions, ownership and legal systems have been shown to have a salient but complex effect on capital structure decisions.

Glen and Singh (2004) contrasted corporate capital structures, asset structures and rates of return of 22 developed markets[62] and 22 emerging markets[63] from 1994 to 2000. This study centres its attention on the analysis of the effects of the economic variables: country, sector and size[64]. Glen and Singh (2004) commented that the major findings of their study may disagree with some anecdotal assumptions regarding the weakness of emerging markets i.e. low or null market and product market competition. These findings are: first, capital and asset structures between developed and emerging markets may be rather similar, despite the considerable cross-sectional variation that exists within these two groups. Second, the country variable exerts salient effects on size and sector variables as the former accounts for 85 percent of the variation on the latter two variables.

[62] The countries which compose the sample are: Australia, Austria, Belgium, Bermuda, Canada, The Cayman Islands, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, The Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, The United Kingdom and The United States of America.

[63] The countries which compose the sample are: Argentina, Brazil, Chile, Colombia, The Czech Republic, Hong Kong, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Pakistan, Peru, The Philippines, Poland, South Africa, Taiwan, Thailand, Turkey and Venezuela.

[64] According to Glen and Singh (2004) organisational size could be thought of as a proxy for economic growth. Besides, this might influence corporate leverage, trade credit, return on stock, market for corporate control and managerial compensation.

In general, the main results of this study[65] can be summarised as follows. The size distribution of firms[66] looks fairly similar between the two groups (developed markets and emerging markets). The exception is that the emerging market group contains more small and fewer large firms. Further, regarding debt, emerging market firms show lower total-debt and noncurrent debt levels, but higher levels of current debt than developed market firms do. That is to say, the percentages shown by emerging markets are 49, 13 and 30, respectively; in contrast to 52, 18 and 28 shown by developed markets (Glen and Singh 2004). Regarding assets, the levels of fixed assets held by emerging market firms seem to be higher than those held by developed market firms. Finally, emerging market returns on assets and equity are shown to be both more volatile and generally lower than those of developed market firms, albeit they have increased over the last few years.

Another interesting study showing that country particularities account for more than the rest of the capital structure determinants was completed by Wiwattanakantang in 1999. This empirical research[67] combines a few well-known capital structure theories[68] along with different corporate governance determinants to discover the empirical determinants of capital structure of Thai listed companies. The main results of this study reveal that, as is the case in developed economies, factors such as profitability, tangibility, taxes and growth are all significant in affecting capital structure. Furthermore, factors related to corporate governance of Thai listed companies, such as ownership structure, also influence corporate financial decisions, especially debt policy choices. A particular case in point is the high levels of debt that seems to be held by the single-family owned companies, in which the ownership belongs to the managers. This fact seems to differ from the general finding of non-significant influence from management ownership on debt-equity decisions.

[65] These results are based on the financial data of year 2000.
[66] Size is measured by the natural logarithm of total corporate assets. This calculation tries to reflect the effects of the two main classes of corporate assets; those that are material and those that represent its human capital.
[67] This study worked with a sample of 270 non-financial Thai firms listed in the Stock Exchange of Thailand in 1996.
[68] Such as the tax-effect theory, the signalling theory and the agency costs theory.

A novel approach that takes into account both sides[69] of loan markets to explain differences in capital structure decisions is that offered by Li *et al.* (2006). They argued that classical theories of capital structure such as the Pecking Order Hypothesis and the Static Trade-Off Model cannot be properly applied to emerging economies to explain their capital structure. This is because these theories assume similar companies face none or the same constraints in accessing efficient financial markets to solve their financing needs. However, financial markets in emerging economies are very underdeveloped and companies are not at the same level of development. Therefore, not all companies have open access to those markets. This last idea highlights the importance of country and institutional features as determinants of capital structure in emerging economies.

Li *et al.* (2006) carried out an inter-region investigation of capital structure decisions and debt maturity among Chinese manufacturing companies. For this purpose, they used a firm-level database containing financial and ownership information of all the manufacturing Chinese companies[70] during 2000 to 2003. Some general results indicate that Chinese non-listed manufacturing companies appear to have more leverage than most listed companies from other emerging countries. At the same time, the Chinese non-listed manufacturing companies mainly employ short-term debt in their capital structures. Li *et al.* (2006) pointed out that these results seem to be driven by the fact that ownership structures[71] and country and region features, i.e. economic development and the quality of the institutional framework, may be equally important as company characteristics in explaining the differences of capital structure choices[72] in China. Additionally, they found that in China, as in other emerging economies, institutions have different degrees of development[73] within the regions of the country,

[69] The supply side mainly represented by banks, and the demand side that embodies all companies.
[70] Of these, 99% are non-listed companies, which is very important since most of the empirical studies in the field relate to listed companies, besides which they do not provide details of their ownership patterns. Additionally, non-listed companies bring out the case that the economic development of most emerging economies is based on the development of their small companies. Even so, small companies seem not to benefit from the advances of their institutions as much as large companies.
[71] The seven ownership groups found are: state ownership; collective ownership; private ownership; shareholding corporations; Hong Kong, Macau, and Taiwan ownership; foreign ownership; and others.
[72] For instance, state ownership is positively associated with leverage and long-term debt, while foreign ownership is negatively associated with leverage.
[73] The four indices used to measure the development of the institutions are: banking development index, the legal environment index, the marketization index, and the deregulation index.

and these differences may affect financing decisions in a similar way as the institutional differences across countries.

2.3 Business Groups

Preliminary research associates business groups (BGs) with emerging markets and leads us to consider them as inefficient and even corrupt organisations because of the findings regarding ownership patterns, governance and other organisational features. Recent empirical evidence, however, has revealed another facet of business groups which demonstrates how useful they can be, particularly in economies where markets and institutions are not fully developed.

Moreover, the fact that business groups exist in some mature industrial economies and predominate in the economies of so many emerging countries reveals that BGs have a strong worldwide advantage as an organisational structure over the other existing structures, for example: individual firms, state-owned enterprises, multinational companies (MNC) and conglomerates. This advantage has been identified as their capacity to internalise functions for which no available external market or supporting institution exists (Colpan and Hikino 2010, Colpan *et al.* 2010, Khanna and Rivkin 2001, Khanna and Yafeh 2007 and Langlois 2009).

2.3.1 Business Groups in Developed and Emerging Economies

To provide a unique definition of business groups may result in a difficult task since these groups imply *'... different organization models and business arrangements to individual scholars belonging to diverse academic traditions'* (Colpan and Hikino 2010, p. 15). Further, this task becomes more complex if one assesses its interpretations across countries.

Business groups, in the most general contexts, have been defined as *'collections of firms bound together in some formal and/or informal ways, characterized by an "intermediate" level of binding'* (Granovetter 1995, cited in Langlois 2009, p. 21); as *'... informational mechanisms for coordinating complementary activities – for gap filling.'* (Langlois 2009, p. 0); or as *'... clusters of coordinated activities carried out by interlinked but legally independent enterprises'* (Colpan *et al*. 2010, p. 6).

Granovetter's (1995) definition, although general, recognises ownership, control and organisational dependency of the affiliated units as important aspects that characterise business groups. Langlois' (2009) definition identifies the process of coordinating an array of complementary activities (gap-filling) as a key reason for business groups to exist; whilst Colpan *et al.*'s (2010) conceptualisation acknowledges/reconciles both perspectives. Additionally, Langlois' (2009) and Colpan *et al.*'s (2010) definitions identify the relevance of *the organisational structure* of business groups as it enables their units (companies) to share key information about the needs to be fulfilled to restore operations/trade and hence promote economic growth.

Current research highlights the fact that diversified business groups are characteristic of emerging markets. However it has been shown that they do also exist in developed markets. Langlois (2009) explained that in emerging economies[74], firms aiming to reduce the cost of monitoring and law enforcement might favour the organisational structure of business groups since business pyramids are often controlled by the family founders. On the other hand, in developed economies, firms preoccupied by solving the gaps created by factors like novelty and change may prefer more decentralised organisation structures such as inter-firm networks. Nonetheless, these economies do also have a high presence of pyramidal business groups. Langlois (2009) suggested that residual rights of control in governance could be one of the main reasons that keep pyramidal business groups being the prevailing corporate organisational structure in developed economies with strong institutions of third-party enforcement and investor protection.

Focussing on emerging markets, a complete conceptualisation of business groups is that provided by Khanna and Rivkin (2001, pp. 47-48) who described them *'... a set of firms which, though legally independent firms, are bound together by a constellation of formal and informal ties[75] and are accustomed to taking coordinated action[76].'*

[74] By emerging economies, Langlois (2009) refers to those which are still growing, so their financial markets are still not perfect and their institutions (i.e. political and market-supporting) are still weak or even non-existent.

[75] Among the informal ties, Leff (1978) noticed 'other-regarding' behavioural factors such as *trust and culture*, in their role as significant bounding ties; however, his research was incipient, so that did not offer a full account of the importance/effects of the presence of this kind of factors in a business group. Leff's definition describes a business groups as *'a group of companies that does business in different markets under a common administrative or financial control, and* [...] *its members are linked by*

Building on this definition, Khanna and Yafeh (2007) identified that equity is the most common formal tie, whilst founder families are the most common informal one. Khanna and Rivkin (2001) observed that most of the affiliated companies of these groups are associated with a single extended family, and these companies often operate in multiple unrelated industries, a finding that seems opposite to the conventional wisdom for advanced economies[77], in particular the USA. Finally, in most of the emerging markets, group affiliated companies tend to be relatively large and economically important. Khanna and Rivkin (2001) found that company affiliation sometimes helps to increase the average group's profit[78], and demonstrated that the knowledge of the firm's group affiliation provides, at least, the same information as the knowledge of the sector/industry to which each of these firms belongs, when analysing the profitability of firms affiliated to a group[79].

All in all, it seems that due to market imperfections business groups have an useful ongoing place in economies, as there will always be diverse market and institutional inefficiencies[80] to overcome. Further, business groups are expected to exist not only in emerging economies but also in developed ones[81], although their existence and prevalence should be more affluent in the former. Moreover, since there are not clearly recognised particulars differentiating the organisational structure of business groups in developed and emerging economies, it might be that their functioning and/or

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*relations of **interpersonal trust** on the basis of **similar personal, ethnic or commercial background**'* (Leff 1978, cited in Khanna and Rivkin 2001, p.48).

[76] Some examples of coordinated actions are: (1) *'...sharing a brand name,* (2) *raising capital jointly,* (3) *lobbying bureaucrats and politicians,* (4) *pooling resources to invest in new ventures,* [... and (5)...] *exchanging resources internally,* [such as **reallocating] *capital*** [...] ***to members in distress or to members whose opportunities outweigh their ability to generate capital themselves***, [among others.]*'* (Khanna and Rivkin 2001, p.48).

[77] This claim refers to the main problems that may arise when managers overlook stakeholders needs and goals to focus on their own, like *'empire building'* objectives or/and *'risk aversion'* issues, among others discussed by Jensen (1986) and Jensen and Meckling (1976), among others.

[78] Khanna and Rivkin (2001) analysed fourteen different emerging economies, which are: Argentina, Brazil, Chile, India, Indonesia, Israel, Mexico, Peru, The Philippines, South Africa, South Korea, Taiwan, Thailand and Turkey. Their empirical results suggested that firms affiliated to a business group performed better than individual firms in six countries, but worse than individual firms in three countries. The other five countries did not present any differences between the profitability rates of their affiliated and individual companies. It is of note that Mexican companies' performance was consistent with the last group performance.

[79] Khanna and Rivkin's (2001) empirical findings showed that the profit rates of the companies affiliated to a business group were closer one to another in twelve of those fourteen countries.

[80] These imperfections are translated into transaction costs to minimise or to obtain a gain from.

[81] Langlois (2009) mentioned that pyramidal business groups are very present nowadays in modern open-access societies such as Canada, Israel or Sweden.

adapting mechanisms to the environment where they operate the factors/features differentiating between them.

2.3.2 The Particularities of Business Groups

Currently, there is not a consensus on whether to consider business groups as welfare-enhancer or welfare-detriment agents. Khanna and Yafeh (2007) argue that business groups are the product of the underlying conditions leading to their formation; therefore, business groups are bound to be extremely different. These underlying conditions are essentially reflected in their ***organisational structure***, ***control and ownership and interaction with society***. In terms of structure, the three main forms into which BGs have evolved are: horizontal diversification; vertical integration which sometimes leads to the possibility of enhancing monopoly power or/and imperfect competition; and involvement with the financial sector. Control and ownership are mainly reflected in the extent to which business groups are set up as pyramids or have cross-shareholdings, and the extent to which they are controlled by families or by outside investors. Finally, their interaction with society refers to the nature of their interaction with the government, *id est*. a close relation or a turbulent one.

Focussing on the different ***organisational structure*** forms of business groups, according to Khanna and Yafeh (2007), corporate diversification (also known as a strategic involvement in multiple industries/sectors) can be beneficial to shareholders when: the affiliated companies have resources that can be deployed in other industries; there are some inefficiencies in equity markets and/or labour markets; there is limited enforcement of contracts; and when there is inadequate rule of law, among others. Conversely, diversification can be harmful when it is mainly used as an empire-building devise or for risk aversion. Empirically, there is a consensual view that corporate diversification[82] destroys shareholders value in the USA, and destroys share holders values for a certain length of time in South Korea. However, this seems to be a particular phenomenon which happened as result of government policies (Schneider

[82] In relation to asymmetry information problems, raising capital within a diversified business group might be more efficient (e.g. less penalised) than tapping outside financial markets.

2009). Borrowing the diversification discount argument, Khanna and Rivkin (2001) tested it and found no evidence of a diversification discount in eleven of the 14 emerging countries sampled. If anything, they found some evidence of a diversification premium in this type of countries. Building on that investigation, Khanna and Yafeh (2007) reported that diversification discount tended to be lower in environments where markets were less developed, especially in regards to capital markets[83].

Vertical integration in business groups is thought of as an organisational device to ameliorate high transaction costs between unrelated parties due to institutional failures. Some examples of these costs are ones related to: underdeveloped legal and judicial institutions, inefficient contract enforcement and corruption. According to Khanna and Yafeh's (2007) research evidence, vertical integration was not only used to cope with the inadequacy of contracting institutions, but also, and maybe more importantly, to obtain monopoly power or to alleviate the double monopoly problem. Furthermore, it was noted that the extent of vertical integration varied considerably across groups within the same country. This suggested that *'...group and industry-factors play*[ed] *a role which is sometimes more important than country-specific institutional factors'* (Khanna and Yafeh 2007, p. 342).

Finally, the involvement of business groups in the financial sector (e.g. banking sector, insurance sector, *et cetera*) is very complex to assess fully. Theoretically, it is thought to be related to transaction costs, level of financial development, the quality of institutions and government regulations per country. Unfortunately, in practice there is scant evidence to prove any of these theses. Nonetheless, the existing empirical literature seems to suggest that the main reason for business groups to get involved in the financial sector is to compensate for the financial and institutional underdevelopment.

Concerning ***control and ownership***, the two main types of controlled structures that business groups present when there is a concentration of ownership are: the vertically

[83] The reasoning behind this argument is that diversified business groups set up in emerging economies with poorly developed capital markets are more able to obtain financing from the business group's internal capital market than from external capital providers (e.g. domestic bank or international financial institutions). This might be the result of severe informational problems.

controlled and the horizontal control structures. In general, the vertically-controlled structure is regarded as pyramid, which at the same time is closely associated with the practice of expropriation of minority-shareholders rights by majority shareholders[84], who usually have a disproportionally larger control rights with respect to their investments. On the other hand, the horizontally-controlled structure refers to the network of control via cross-shareholdings. In other words, a horizontally controlled structure is developed when a (closed) group of shareholders are members in all/most of the board of directors of the affiliated companies, so that they will have preferential control positions in them. It is of note that although this dichotomous classification of controlling structures used by business groups has been theoretically identified, in practice this classification has demonstrated some flaws. Some examples of these failures are: the scarcity of company information available to map these structures; the limited disclosure of this type of information; and the fact that business groups often use both structures at the same time, which makes it very difficult to define a clear cut-off between them. Finally, the extent of involvement of inside (e.g. family control) or outside shareholders varies wildly across countries and between companies, as has been already discussed in detail at the beginning of this chapter, in section 1 *'Ownership Structure'*.

With respect to the ***interaction with society*** or social welfare perspective, Khanna and Yafeh (2007) explained that the role of business groups is ambiguous since they interact with the different economic and institutional conditions of the environments that encourage their existence and prevalence. Preliminary literature mainly highlighted the negative side of business groups; that is, their preference to carry out rent-seeking activities and enhance monopoly power. On the other hand, recent literature is pointing out that BGs sometimes make up for underdeveloped or non-existent institutions, helping to generate/expand social welfare. Hence, business groups can be either *"paragons or parasites"*. Empirically, Khanna and Rivkin's (2001) analysis[85] reported some striking results revealing that business group profitability was larger the greater the proxies for capital market development.

[84] This expropriation practice is known as tunnelling.
[85] Khanna and Rivkin (2001) carried a cross-country correlation analysis to explore the relation between the domestic Institutions and the performance of BGs. This analysis controlled for inefficiencies in capital and labour markets, general level of development, informational failures, and corruption and bureaucratic influence via eleven different proxies.

Furthermore, they found no evidence supporting the business groups' rent-seeking argument. In other words, there was no evidence of correlation between the proxies of business group's importance and inefficiencies in markets other than capital markets. Building on the argument regarding the kind of relationship between business groups and society, Khanna and Yafeh (2007) identified that business groups do not only respond to their environment, but also *shape* and *influence* it. This dynamic effect of business groups on their economic environment is sometimes socially welfare-enhancing, and sometimes not. It is of note that there is very scarce econometric evidence on this point; however, some historical evidence in different countries is supportive of this view. A case in point is the economic rebound of the Mexican economy after its financial crisis in 1995 (Castañeda 2002, 2005 and 2007), which is explained in more detail in the next section of this chapter, in 2.4.2 *Mexico and its Political Economy*.

2.3.3 Other Perspectives

Since business groups are a common phenomenon worldwide, different schools of thought have explored the possible reasons for their formation, prevalence and survival. A review of the main approaches is as follows.

The capability for repeated industry-entry build between entrepreneurs and companies was proposed as the origin of business groups in emerging economies by Guillén (2000), who discussed that this industry entry capability could be rather a positive skill worth preserving as long as asymmetric foreign trade and investment conditions prevail.

Colpan and Hikino (2010) argued that the commonest forms of business groups are horizontally diversified and pyramidal BGs, and that these two different types of BGs ought to have different reasons for being formed. Hence, different approaches for their analysis should be used. An economic perspective may be used for diversified BGs since their key formation reasons are associated with market imperfections and their

associated transaction costs[86], government policies, and internal competitive resources and capabilities; whilst a corporate finance perspective may be better suited for pyramidal BGs as ownership and control appears to be the main reason for them.

Under an economics perspective, Colpan and Hikino (2010) suggested that *causal exogeneity* or the primacy of environmental factors, and *endogeneity* or the dynamics of intra-group structure and processes are the two main factors driving the reasons for business groups to be formed as diversified groups. In other words, *causal exogeneity* is involved when market imperfections and government policies are the conditions functioning as instrumental mechanisms driving their formation and development. A common example is the case of unfulfilled demand as result of an immature market and a government directive to artificially create and secure demand. On the other hand, *endogeneity* is implicated when the internal competitive resources and capabilities of the affiliated companies are the drivers of the formation of diversified BGs. That is to say, the skills needed for repeated industry-entry patterns, such as contact capabilities and project-management; or the trans-product capability at business level, which refers to the building of shareable knowledge across the group, which may become a source of sustainable advantage even in competitive markets refer to *endogeneity* (Guillén 2000 and Colpan and Hikino 2010).

From a corporate finance perspective, it has been discussed that a critical issue in the formation of vertical pyramidal business groups is the separation of ownership and control, which often results in excessive control rights in contrast with the investments. Further, control pyramids might be considered as one of the most important control mechanisms used by business groups, which are widely observed in different degrees in many developed and emerging economies (Khanna and Rivkin 2001, Khanna and Yafeh, 2007, Langlois 2009 and Colpan and Hikino, 2010).

Colpan and Hikino (2010) argued that the main benefits from pyramidal business groups might be *tunnelling practices* and the extraction of *private benefits.* By *tunnelling practices* they distinguished two main types of activities. The first practice

[86] According to Colpan and Hikino (2010, p. 41) transaction costs are *'...theoretical costly when markets and their supporting institutions, such as regulatory systems, contract enforcing mechanisms, and rules for information disclosure and transparency are immature and weak.'*

derives from the standard Jensen and Meckling (1976) argument of controlling shareholders extracting at least part of the income generated by the companies within the pyramid. The second tunnelling practice associates business groups as *'...private mechanisms of "planned industrialisation comprising a simultaneous planning of several complementary industries"'* (Colpan and Hikino 2010, p. 46). Taking into account this second practice, one could argue that pyramidal business groups are important in emerging economies as they can help to promote different industries when their economies lack mature markets and adequate supporting institutions. This should be the case as long as in the long-run their entrenchment cost does not surpass the short-run societal cost *'... ensuing from the eventual transfer of income from minority shareholders through profit tunnelling, the less-than-optimal development of capital markets, and the exercise of economic power by a few wealthy business families ...'* (Colpan and Hikino 2010, p. 46). It is of note that historical developments in the USA and the United Kingdom resulted in the legal and regulatory impossibility of harbouring this class of controlling business groups in their economies (Colpan and Hikino, 2010).

Regarding the private benefits from pyramidal business groups, Colpan and Hikino, (2010) explained that since this singular form of BGs remain widespread in mature market economies equipped with strong legal and market institutions supporting the functioning of capital markets; controlling shareholders may also (or only) extract private benefits in terms of social, political and economic gains from invisible assets like group reputation and prestige, political connections, *et cetera*.

A sociological perspective acknowledging goals like *'... institutional legitimacy, political power and social fitness'* for the creation and continuing existence of business groups was noted by DiMaggio and Powell in 1983 (cited in Khanna and Rivkin 2001, p. 50). This perspective has as its main subject of study the behaviour of individuals instead of companies; therefore, business groups are considered networks of social significance. This sociological perspective argues that individuals value social fitness as much as an economic gain. Consequently, individuals might prefer to do business within their closest social groups in order to maximise their economic gains through the minimisation of transaction costs. In other words, for any individual, his/her family members, friends and other close members are the hierarchy of preference to do

business with as result of the ***trust*** between them. It is thus believed that the use of these social ties diminishes costs, such as those related to agency conflicts, contractual disputes and information asymmetries, among others. Further, the variation in structure of business groups reinforces the importance of the non-economic functions of business groups (Granovetter 2005, cited in Khanna and Yafeh 2007). That is to say, the structures of BGs reflect not only the standard economic factors but also other equally important factors for groups to be formed and prevail, such as inheritance customs, kinship structure, national ideology, prestige and pride.

Alternatively, Langlois (2009) mentioned that business groups and political institutions are so closely related that in some contexts they are thought to be and/or behave as the same thing. In particular, pyramidal business groups have been regarded as the *natural* or default form of a business organisation as the *State* is the natural form of territorial government through history (North, Wallis and Weingast 2009, cited in Langlois 2009). The reasoning behind the *natural state* theory elucidates the State not as a monopolist person with the ability to enforce his/her power, but as a *'... relatively stable coalition of elites who limits access to the resources of society in order to create credible incentives to cooperate rather than fight among themselves'* (Langlois 2009, p. 24). This framework may be easily transferable to the modus operandi of business groups as they represent *'... a self-enforcing coalition with its own rules, norms and mechanisms of enforcement'* (Langlois 2009, p. 29).

Moreover, the political economy literature on groups leads us to think that in most countries the appearance of the business group phenomenon was strongly influenced by government policies and/or directives. Some examples of these policies are: Import Substitution Industrialisation (ISI) in Latin America, export orientated growth in East Asia, social democracy in Scandinavia and defence contracting in Israel (Schneider 2009).

Schneider (2009, p. 4) explained that ownership (the allowed ownership) is the key governmental method of supporting business groups' growth. In other words, the political advantage of BGs is due to *'... their towering size*[87] *in their domestic*

[87] By towering size is meant the proportion of the domestic economy from which BGs benefit due to the diverse economic sectors they belong to and to the pyramidal structure established, which allows owners

economies, [...] *and the capacity to get and use economic and political information, especially through privileged access*[88] *to the policy making process.'* Conversely, government policies like reserving particular economic sectors for state enterprises or multinational companies (MNCs) and restricting the access to banks are regulations that set the ultimate boundaries for groups' expansion.

In addition, it has been suggested that the nature of business groups' relations with governments ought to change when BGs reach their maturity, if they develop some entrenchment problems at this stage. That is to say, even when governments assisted the formation and development of BGs, when these groups reach an important economic and/or political power, their relation ought to vary considerably from a protégé status to a sector that loses the government favour (Khanna and Yafeh 2007). Schneider (2009) proposed however an alternative theory which argues that business groups could not developed a pure economic or political entrenchment problem since empirical evidence shows a high turnover among major BGs. In this regard, for example in Latin America, Brazil, Mexico, Chile, Argentina and Peru are characterised by high rates of BGs turnover. Further, when analysing the common variables in this group, a radical reform enacted variable was shown as a strong candidate for a decisive short-term life span of a business group, as happened in the case of Mexico in the 1990's decade (Schneider 2009). Moreover, Schneider (2009) suggested that when the nature of the relationship between BGs and government changes, they both adjust their interaction in order to maintain some advantages, as both parties benefit from this relationship. For instance, according to Colpan and Hikino (2010), business groups often evolve into diversified BGs when a government policy moves on and targets different industries (probably in more advanced fields), so that the original business groups collaborating with the government on developmental schemes end upgrading their capabilities and diversifying their portfolios. On the other hand, some examples of government benefits from this relationship are: business groups are a strategic communication and coordination means of governments and also important contributors to their political campaigns and parties. Finally, historical evidence

to use smaller amounts of their own capital to control vast assets and significant shares of economic activity (Schneider 2009).

[88] It is of note that this access does not mean that BGs write or veto policies, but they are an important party with privileged knowledge in this process. Nonetheless, it is worth mentioning that although substantial, these advantages must not be overestimated or regarded as guarantee of longevity. There is a high turnover of BGs between countries.

collected by Khanna and Yafeh (2007) confirmed that government support is an important factor in the formation of business groups in many environments, and that the vast majority began as family dominated corporations, often with close ties to the government.

2.4 The Case of Mexico: Economic-Financial Environment and Corporate Governance Practices

Initial research describes Mexico as an ***emerging market***, with clear information asymmetries and high levels of inflation, country risk and volatility, despite its success in the trade liberalisation, deregulation and privatisation processes. However, the latest research provides striking insights pointing out the healthy potential of Mexico to become an economy that could rival the Group of Seven **(G-7)** in terms of its capability to develop into a source of sustained growth and global demand in sizeable markets, a situation increasingly hard to find nowadays in developed economies. This potential has been acknowledged via its categorisation as a member of the **N-11**[89] (Next Eleven) countries (Wilson and Stupnytska 2007 and O'Neill *et al.* 2010).

2.4.1 The Economic and Political Generalities of Emerging Markets and Latin America

2.4.1.1 Emerging Markets

Emerging markets have proved to be a fertile ground for the global investor, regardless of their consideration as new markets. Furthermore, their financial importance is growing so fast that even the definitions for *this term* show to some extent their evolution. In this sense, it is possible to categorise the available definitions into two different groups: the first one comprising the most general or loose statements that cannot be applied to all emerging markets; and the second group, which provides a good understanding of the main characteristics of these markets, explaining their diversity.

To illustrate the differences between these two groups, five definitions are presented. The first, second and third correspond to the first group that fails to offer an accurate

[89] The N-11 comprises the following countries: Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, The Philippines, South Korea, Turkey, and Vietnam.

picture of the emerging markets; whereas the fourth and fifth belong to the second group, which brings a clear insight into these markets.

(1) '*A euphemism for the world's poor countries, also known, often optimistically, as emerging economies'* (Economist.com cited by Fraser 2010, p. 4);

(2) '[a] *financial market of a emerging country, usually a small market with a short operating history*' (Investorwords 2011);

(3) *'... the emerging markets economies are emerging economies that are, nonetheless, attractive from the point of view of foreign investment, both portfolio and direct investment'* (Blázquez and Santiso 2004, p. 297);

(4) '[a] *market with a relatively short and uncertain history of open market relations and foreign investment. Emerging market is characteristic of a country or state that has previously had a centrally planned and isolated economy. In emerging market nations such economic conditions were generally due to long standing one-party political and socioeconomic systems. Depending on its nature and commitment to becoming a free-market economy, one emerging market may be different from another'* (Investorglossary 2011); and

(5) *'...countries that are restructuring their economies along market-oriented lines and offer a wealth of opportunities in trade, technology transfers, and foreign direct investment'* (Li 2011).

Until now, there has been no agreement on which would be the best criterion to define a country as an emerging market. However, one of the most commonly used is related to the Gross National Product (GNP) per capita, proposed by the International Finance Corporation (IFC). Nonetheless, a key flaw of this criterion is that its computation may mask important variations within a country, that is to say, the GNP per capita could misrepresent the reality of countries with clearly different income strata per area, such as China or India, by giving an average GNP of the whole country. Nevertheless, due to the diversity of these definitions, some common features of these markets have been identified, which while they are not requirements per se, have been found in most

of the emerging markets to different extents. These features are: (*i*) fast-growing economies; (*ii*) low levels of income per capita; (*iii*) relatively immature capital market infrastructure; (*iv*) weak property rights; (*v*) relatively under-developed institutions (mainly legal, judicial and regulatory); (*vi*) tenuous adherence to capitalist principles; (*vii*) varying political models; (*viii*) restrictions on foreign investors; (*ix*) some freedom of foreign exchange and fund repatriation; and (*x*) inherently risky (Fraser 2010 and Li 2011).

The term ***emerging market*** was used for first time in 1986 by the International Finance Corporation[90] (IFC) in the launching of the Emerging Market Growth Fund Inc., which aimed to *'...seek long term capital growth through investments in securities of emerging countries'* (Heyman 1999, p. 10). After the creation of this fund, emerging markets received more attention from investors in spite of their basic understanding of this kind of markets. The first comprehensive Emerging Markets Index was launched by Morgan Standard and Capital International (MSCI)[91] in 1988, while the first Emerging Market Index by the IFC was published in 1993; afterwards, other emerging markets indexes appeared alongside. It could be said that the introduction of these two indexes brought a common framework for investors, boosting their interest in these markets, and consequently, their performance. The enhanced performance of emerging markets can be easily realised. A clear example is the behaviour of the MSCI Emerging Markets (EM) Index, which moved from about one percent of the global equity opportunity set in 1988 when it was formed by only eight countries[92], to 14% in 2010 when 21 countries[93] were included.

[90] The International Finance Corporation is a member of the World Bank that invests in the private sector. The term emerging market was attributed to Antoine Van Agtmael, who being an executive of the IFC coined the *emerging market's* term in 1981.

[91] MSCI is a worldwide leading provider of investment decision support tools. Some of the products and services offered include: indices, portfolio risk and performance analytics, and governance tools from a number of internationally recognised brands such as Barra, RiskMetrics and ISS.

[92] The eight countries included in the first MSCI Emerging Markets Index were: Argentina, Brazil, Chile, Jordan, Malaysia, Mexico, The Philippines and Thailand.

[93] As of December 2010, the MSCI Emerging Markets Index comprised the following 21 emerging market countries: Brazil, Chile, China, Colombia, The Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, The Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.

During the first half of the nineties the return generated by emerging markets was quite remarkable: 20.9 percent[94] per annum from 1990 to 1994. However, the second half of that decade reminded investors that those amazing returns were the result of the high risk inherent in the emerging countries, among other things. Further, that risk was materialised into the different financial crises that crumbled all the markets, such as the Tequila crisis in 1994, the Asian Financial crisis during 1997-1998, and the Russian Ruble crisis in 1998. Nonetheless, once the financial markets overcame these crises, emerging markets outperformed their functioning, showing some stabilisation and producing even healthier returns. In fact, some countries such as Mexico started to show signs of a sustained economic growth along with some improvement in their financial market performance, a situation that led to questions being raised as to the appropriateness of their classification as emerging markets. As a consequence, by the end of 2001 Goldman Sachs coined the acronym ***BRIC***[95] to refer to Brazil, Russia, India and China; and in 2005, the acronym ***N-11*** (the Next Eleven). The latter comprises the *"following"* eleven emerging economies that in the long-term could be as influential as the BRIC, but as a source of global demand and sustained growth. Those eleven countries are: Bangladesh, Egypt, Indonesia, Iran, **Mexico**, Nigeria, Pakistan, The Philippines, South Korea, Turkey and Vietnam.

The purpose of introducing these two acronyms was to point out the emerging economies which, according to Goldman Sachs projections, have a potential to be comparable to or even greater than the main developed economies when assessed by their ***weight in the global economy***, like their contribution in global growth, and their share in global GDP, global trade and FDI, among others. For instance, Wilson and Stupnytska's work (2007) revealed that in 2006, twelve percent of global GDP was contributed by the BRIC and seven percent by the N-11. Furthermore, to assess the probability and the speed with which emerging economies might be comparable to the main developed economies (e.g. G-7), Goldman Sachs developed a model of growth[96]

[94] This datum was taken from Fraser's work (2010) page 11.

[95] In April 2011, Goldman Sachs altered this acronym into BRICS in order to include South Africa (Investopedia 2012).

[96] This model is structured under the approach of *'conditional convergence'* in growth research, which proposes that lower-income countries tend to catch-up with richer ones, when the right conditions are in place. In order words, for this convergence (projections) to become reality it is crucial to maintain the required growth conditions. Additionally, this model offers a simple method to project the speed of growth in the size of the economies in a clear and comparable way, while looking to achieve longitudinal empirical validity with the implementation of a statistical measurement tool, the GES score,

which can be described, in simple terms, as *'... a function of growth in the labour force, capital accumulation and a process of convergence in technology with the developed markets that drives productivity with growth performance'* (Wilson and Stupnytska 2007, p. 8). Further, with the aim of giving more accuracy and statistical validity to these projections, Goldman Sachs also elaborated a measure for the growth of the economic conditions and a measure for the financial development. The former measure, called Growth Environment Score[97] (GES), helps the generation of the assumptions on the speed with which productivity catch-up would take place and is formed by the observations/measurements of thirteen components[98] (variables) across the following five key areas: (*i*) macroeconomic stability, (*ii*) macroeconomic conditions, (*iii*) human capital, (*iv*) political conditions, and (*v*) technology. On the other hand, the financial development score assesses whether the current domestic financial architecture provides adequate support to the macro-fundamentals in the N-11 countries, mainly by analysing the relationship between the underlying domestic financial market development and income. This financial score is made up of seven financial indicators, which are: (*i*) liquid liabilities as a percentage of GDP; (*ii*) offshore bank deposits as a percentage of domestic bank deposits; (*iii*) total bank assets as a share of central bank assets; (*iv*) private credits from banks as a percentage of GDP; (*v*) stock market capitalisation as a percentage of GDP; (*vi*) outstanding private and public debt securities as a percentage of GDP; and (*vii*) currency outside the bank system as the share of base money. All of these financial indicators suggested a positive relationship with income per capita (O'Neill *et al.* 2010).

The aim in the formation of these two groupings, the BRIC and the N-11, was to distinguish a country/group of emerging countries that had the potential to develop its or their economy or economies to the size of those of the main developed countries. However, their effects as a political alliance or a formal trade union have clearly

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which aims to provide a systematic way of comparing progress in key areas across different countries over different periods of time (O'Neill et *al.* 2005 and 2010).

[97] The reason behind this score is that strong growth is best achieved with a stable and open economy, healthy investment, high rates of technology adoption, a healthy and well educated work force, and a secure and rule-based political environment (O'Neill et *al.* 2005).

[98] The composition of the five areas which allocate the thirteen different components is as follow. 1. Macroeconomic Stability comprises: (*i*) inflation, (*ii*) government deficit, and (*iii*) external debt. 2. Macroeconomic Conditions includes (*iv*) investment and (*v*) openness of the economy. 3. Human capital is formed by: (*vi*) education and (*vii*) life expectancy. 4. Political Conditions encompass: (*viii*) political stability, (*ix*) rule of law and (*x*) corruption; whilst 5. Technology, (*xi*) personal computers, (*xii*) telephones and (*xiii*) Internet.

influenced the world economy. In other words, the remarkable impact of the BRIC on the global economy has proved to be the result not only of its rapid growth[99], but also of the scale and seismic shift in the pattern of global activity[100], which is clearly materialised in their being increasingly important counterparts to the US current account deficit. In this regard, the investment bank pointed out that the BRIC should not be thought of as emerging markets in the classical sense since they were and are still critical and integral to an ever-growing globalized world, while O'Neill et *al.* (2005) stressed that in the global economy, *'... optimal economic policymaking cannot be undertaken without including all of the BRIC countries at the highest level'* (p. 4). In other words, the inclusion of the BRIC group in the global economic policy-making process is particularly important because they have proved to have the scale and the trajectory to challenge the main economies not only in economic and financial terms, but also political terms, if that was the case.

On the other hand, the N-11, although unlikely to rival the BRIC as a grouping in scale, is a group that could potentially have an impact similar to that of the BRIC countries in rivalling the G-7 at least in terms of new economic growth, if doing so in absolute terms was not possible. The selection criteria for the N-11 was to trace the countries that would have *the potential* (i.e. population and demography) and *the growth conditions* (e.g. resource-wealth and sub-regional dominance to some extent) to become comparable to the current major economies or to the BRIC themselves.

It is clear that although the N-11 has the potential to become an important driver of the global economy (e.g. as a source of sustained growth), the influence that this group could exert into the global economy is less dramatic than that of the BRIC group. This is because the levels of income per capita and integration into the global economy that the N-11 already have are higher than the levels reached by the BRIC. In other words, albeit the BRIC at present (since the acknowledgement of its economic and financial potential as a grouping) is a larger grouping with a greater share in the global GDP than the N-11, the N-11 is a higher income grouping, more urbanised and more open to

[99] According to O'Neill et *al.*'s (2005) findings, the BRIC between 2000 and 2005 contributed around 28 percent of global growth in US dollars, and 55 percent in Purchasing Power Parity (PPP).

[100] For example, as of November 2005, the BRIC group contributed around 15 percent of the global trade and held more than 30 percent of the world reserves; and over the last two years, they all had appreciated their real exchange rates, and outperformed their stock markets, with Brazilian, Russian and Indian indices up by around 150 percent during this 2-year period (O'Neill et *al.* 2005).

trade than the BRIC. In this regard, Wilson and Stupnytska's research (2007) showed that, as of 2006, the average income of the N-11 was US dollars 3,069; whereas it was US dollars 2,359 for the BRIC. The percentages of the share of trade in GDP were 60.4 and 48.9, whilst the percentages of urbanisation were 46.8 and 40.5 for the N-11 and the BRIC, respectively.

Finally, it seems that their ongoing unfamiliarity to the financial markets as a group along with their diversity, have made them a very appealing investment product. Further, since the N-11 is a larger group with a rich diversity, the assessment of the potential for growth of each member is as significant as their performance as a group. Therefore, it seems that some of the importance of the N-11 grouping might rely on their investing opportunities for both companies and investors due to their potentially large, fast-growing markets, with rising incomes and activity.

2.4.1.2 Latin America

In order to have a better understanding of the ***political economy*** of Mexico, it is befitting to understand the main features of Latin America, the geo-politic region formed by 20 countries[101] to which Mexico belongs. Latin America (LA) could be described as a land rich in opportunities because of its abundant natural resources, both agricultural and industrial, but delineated by contradictions due to the partially-fulfilled promises of economic and financial growth. Furthermore, the interaction between its politics (i.e. *populism*) and economics seems to have worsened its economic-financial history, which has been reflected in diverse currency crises, bank failures and hyperinflation.

According to Fraser (2010), Latin America is a region that has long suffered from deep inequalities that were aggravated by the rise of a powerful export oligarchy during the second half of the nineteenth century. In those days, the general principles of capitalism seemed to have failed here as the Latin American countries could only have been considered as capitalist economies in terms of their looking for profits by the selling of goods in the markets, but nothing else. Hence, the sources of success needed

[101] The 20 countries, in alphabetic order, are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, The Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

to come from other means, and in this case, political connections and monopolistic strangleholds on industry were widely used. This situation enhanced the concentration of wealth in a few small groups of people. Suddenly, ***populism*** became the most favoured political model in this region, with most of the populist episodes probably arising because of the desire of a hostile group to recover some kind of <u>*ownership*</u> over the society and government. (Fraser 2010).

> According to Williamson (2009, pp. 247-248) ***populism*** can be defined as *'... the phenomenon whereby a politician tries to win power by courting mass popularity with sweeping promises of benefits and concessions to large interest-groups, usually drawn from the lower classes. Populist leaders lack a coherent programme for social change or economic reform, but try to manipulate the existing system in order to lavish favours on underprivileged sectors in return for their support'*.

Even though *populism* has taken diverse forms in different places and times, it has been closely associated with the Latin America's political history since every Latin American country has experimented with *populism*, to some extent, as its political model.

Populism, like any other governmental regime, exerts a direct influence on the economy and markets of the countries that apply it. In general, Latin American populist regimes have brought instability since they have frequently needed to incur deficit spending because of the tapping for the policies devised in order to achieve electoral victory. In other words, as democratic governments are indebted to the groups which made their political victory possible, Latin American populist governments (LAPGs) have thus needed to cater specially for the disadvantaged social classes, incurring in this way high levels of monetary growth (inflation) and debt, mainly from foreign governments and/or institutions. As a matter of fact, it can be said that there has been a risky linkage between *Latin American populist governments and* ***debt***. This is because of the struggle to reconcile social welfare promises with the need for capital, without compromising the economic health of Latin American countries.

Some examples of this struggle are the financial crises of 1982 and 1994, 1999 and 2001, which originated in Mexico, Brazil and Argentina, respectively, but which spread worldwide. The financial crisis of 1982 will now be discussed to highlight the interrelationship between LAPGs and debt and the impact of this crisis in the global economy. The financial crisis of 1982 started in the August of that year with Mexico announcing its inability to meet the debt servicing of its foreign debt, which amounted to US$80 billion. It is worth mentioning that the financial-economic conditions of Mexico in 1982 were rather precarious due to: (1) the high interest rate payment of its foreign debt; (2) the sharp decline of one of its main sources of income named revenues from exporting oil; and (3) the global recession initiated in the United States of America in the same year. After this announcement, investors realised that the insolvency problem was not exclusive to Mexico, but rather a common problem across all LA as the real level of indebtedness of the whole region amounted to US $332 billion[102] by the end of 1982. Furthermore, at the same time another 40 countries had missed servicing their debt. Investors, therefore, became aware of the possibility of a systemic collapse happening, which was caused to a great extent by an ill-boosted Eurodollar market flooded with *petrodollars*[103], which at the time, were the main financing source of the global Latin American debt.

Because of the magnitude and extent of this financial crisis, governments and international organisations applied diverse strategies to avert a global financial collapse, which included the financial recovery of Latin America. However, at the beginning of this crisis policymakers failed to recognise that this was a solvency rather than a liquidity crisis. Therefore, the first rescue-policies generally focussed on increasing the current flow of money of the collapsed economies by means of injecting them with more money and giving some advice regarding the implementation of certain austerity measures, such as increasing taxes and tariffs and decreasing their financial spending. These measures were inadequate as they were unable to regenerate the economic growth of the collapsed economies. In 1985, the United States department of Treasury (US Treasury) proposed a new recovery plan named '*The*

[102] Source: A figure presented by Fraser (2010, p. 57) which was elaborated using data from the World Bank Group. That data is based on the Latin American & Caribbean group as defined by the World Bank.

[103] Term coined in 1973 to refer a United States dollar earned by a country, mainly Middle Eastern countries and members of OPEC, from Western nations through the sale of petroleum and which is later deposited into those same Western nations' banks (Investopedia 2012).

Baker Plan[104]*',* which also failed to solve the debt crisis. *The Baker Plan* believed in sustained growth as the only feasible solution for debtor countries to overcome this crisis. It was therefore designed to reactivate the economy of 15 seriously indebted countries by channelling 29 billion dollars as new lending which was jointly subsidised by commercial banks and multilateral institutions in lieu of specific structural reforms, such as: tax cuts, the reduction of trade barriers, and the privatisation of state companies. Nevertheless, the Baker Plan did not provide the whole financing; and the lending actually given worsened the debt burden of the debtor countries (Fraser 2010 and Ruggiero 1999). In 1989, the United States of America announced '*the Brady Plan*[105]*'*, which acknowledged the necessity to decrease the levels of debt in order for emerging countries to be able to reactivate their economies and to service the remainder of their debts at the same time. *The Brady Plan* was designed as a voluntary program that offered different measures for debt restructuring, including:

> *'...swaps, debt exchanges, debt buybacks and, most importantly,* ***debt forgiveness****. By 1994, 18 countries saw $60 billion of debt forgiven under the Brady plan, representing nearly $200 billion in bank claims. Most deals forgave about 30 to 35 percent of a country's debt'* (Fraser 2010, p. 62).

It was not until the Latin American debt level decreased that the region could have some free money in circulation to consume and invest, and therefore, to foster its economic growth. However, the populist governments of this region found it rather hard to maintain the prescribed financial measures, e.g. to decrease their governmental spending; compromising in this way the economic growth and development of their nations.

Moreover, having in mind that ***inflation*** is one of the main adverse consequences of excessive debt; uncontrolled monetary growth might result in significant levels of inflation as *inflation* is a function of the money supply (liquidity) with respect to the economic demand for money, as Fraser (2010) mentioned. Since LAPGs have been largely favoured with the votes of the lower social classes, at least at the beginning of

[104] The Baker Plan was named after its creator, James A. Baker, who in 1985 was the secretary of the US Department of Treasury.
[105] The Brady Plan was named after its creator, Nicholas Brady, the secretary of the US Department of Treasury in 1989.

these governments, their ruling was endowed with the necessity to disburse recurrent and substantial cash-handouts to fulfil their campaign-promises throughout the ruling period. Nonetheless, although it is expected that the priority of governments is the pursuit of the prosperity of the country rather than the pleasing of the sectors that helped their political victory, it appears that for LAPGs the accomplishment of their populist policies has been more important than the appropriate attainment of their core duties. Because of this misallocation of resources, LAPGs have frequently resorted to asking for aid in ***foreign debt.*** However, a word of caution is needed when resorting to indebtedness since its help to alleviate financial-economic problems in the short-term might lead to *inflation* in the long-term, when its level is not carefully controlled. Therefore, the conversion of *debt* from a temporary-recovery solution into a macro-economic problem generally arises because of the non-backup of the excess of cash-flow money injected into the economy with its corresponding growth in the total domestic output. In this sense, it is remarkable that all the Latin American countries have experienced high levels of inflation. For instance, Brazil was one of the countries with the most outrageous hyperinflation episodes, from 1980 to 1994 when its inflation increased more than a hundredfold per annum, that is, a total of 166 billion percent over this 15-year period (Fraser 2010). Furthermore, two common problems inflicted on economies by inflation are: (1) the decline in real prices, including real income, which reduces consumption power and hinders investment; and (2) the distortion of the price signals between producers, business and consumers, such as the disguise of an increase of the price of a good because of the inflation-related adjustments with an augment of the real demand of that good, or vice versa, which worsens the inflation levels. Nevertheless, one might not overlook the fact that low controlled levels of inflation could be sometimes considered as beneficial, despite the fact that inflation in itself is detrimental to any economy and generates instability: the higher the levels of inflation, the more unstable an economy becomes.

Finally, governments also influence markets by devising the rules of their functioning, by regulating property rights and wealth redistribution, and by setting the basis for law enforcement. The main relation between politics and markets in LA appears to be ***wealth redistribution***, which seems biased since the winners and losers look as if they have been stimulated by the populist governmental motivations rather than by the pure market forces, as should occur in any democratic system. Further, from a broader

perspective, it seems that Latin American markets have as one of their key features to be very volatile and with profound market cycles, a result of the features of the Latin American populist governments, viz. *'...undisciplined fiscal spending, runaway inflation, and lack of property rights...'* (Fraser 2010, p. 53). For instance, based on annual returns, the Latin American stock markets have been 30 percent more volatile than the stock market of all emerging economies as a whole[106] since 1988.

2.4.2 Mexico and its Political Economy

Having discussed some of the political and economic features of Latin America, partly as an element of the geo-political and cultural background of Mexico, this investigation will now focus on the exploration of the key facts that laid the foundations of the current political economy of Mexico.

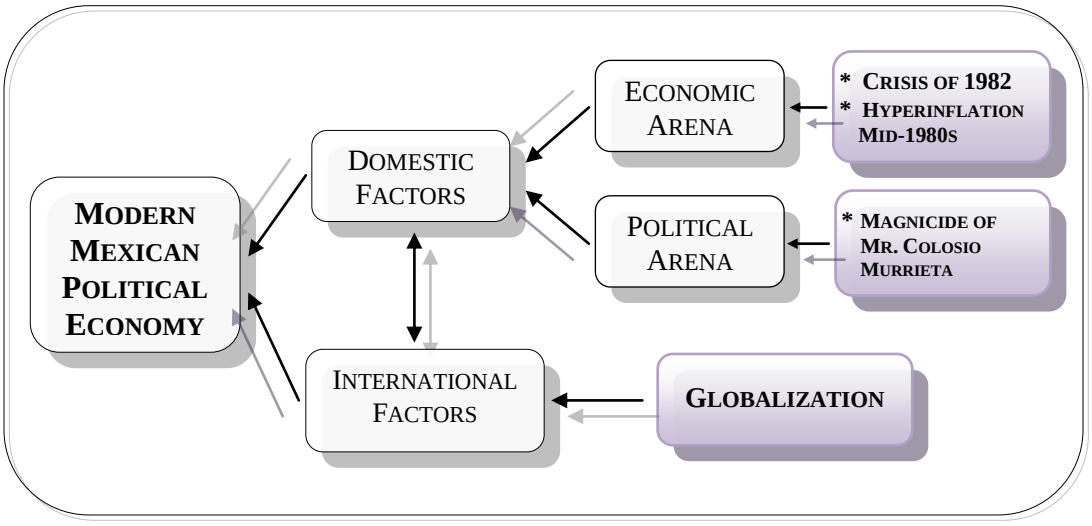
It is fair to say that during the last two decades of the twentieth century, Mexico experienced the most dramatic changes in the economic-financial and political arenas, which framed its current political economy. These changes responded to domestic and international factors that cannot be completely separated from each other due to their interplay. This investigation, nonetheless, attempts to look at them individually, whenever possible, in order to ease the understanding of their role and influence.

Bearing this in mind and borrowing the line of thought used in Fraser's work (2010), one might consider as the principal *domestic drivers:* the Financial Crisis of 1982 and the inflationary spiral experienced during the mid-1980s, along with the *'tragic events of 1994'*[107], viz. the magnicide of Mr. L. D. Colosio Murrieta and the uprising of the State of Chiapas; whilst globalisation, as the main leading *international factor* that triggered the urgency to re-evaluate the Mexican political economy. Figure 2.1 below, offers a detailed picture of the role and interaction among these factors when the modelling of the modern political economy of Mexico took place.

[106] Source: MSCI database.

[107] There is not a specific event to which one can refer to as the turning point of the political arena; however, the tragic events of 1994 had clear social and economic consequences which made it inevitable that some changes in the political economy took place as it will be explained later in this section starting on page 75.

Figure 2.1 Key factors that framed the modern political economy of Mexico.



As a result of this reassessment, and following *the Washington Consensus*[108] recommendations, the Mexican government implemented an extensive scheme of policy reforms that involved its budget, the money supply, the exchange rate, trade, liberalisation, deregulation and privatisation, among other, from which Mexico excelled in the last three; that is, ***liberalisation, deregulation and privatisation*.**

All these policies shared the goal of accelerating the recovery from the 1982 financial crisis[109] in the short-term, whilst achieving an economic stabilisation that would assist the Mexican economy to develop into a *free-market economy* thereafter. Nevertheless, this attempt to regain financial and economic control and to become a free-market economy was challenged even further by the levels of inflation experienced during the second half of the 1980s. Inflation (in this case better defined as *hyperinflation* due to its extreme levels) was clearly an important macro-economic problem as it averaged 90 percent per year, reaching its peak at 132 percent in 1987. Nonetheless, from the

[108] The *Washington Consensus* is a ten-policy reform agenda created by the economist John Williamson in 1989. This consensus summarises the ten lowest common denominator of policy advice agreed by the International Monetary Fund, the World Bank, and the US Treasury Department, for the financial recovery of the distressed Latin American countries. Those ten standard policy-reform points addressed are: (*i*) fiscal discipline; (*ii*) the reordering of public expenditure priorities; (*iii*) tax reform; (*iv*) the liberalisation of interest rates; (*v*) a competitive exchange rate; (*vi*) trade liberalisation; (*vii*) the liberalisation of inward flows of foreign direct investment (FDI); (*viii*) privatisation; (*ix*) deregulation, focused on the abolishment of entry and exit barriers; and (*x*) the securing of property rights (Williamson 2004).

[109] The Mexican financial crisis of 1982 is discussed in the previous section, starting on page 64.

early 1990s onwards, Mexico started to show good signs of economic stabilisation as a result of the *free-market policy reforms* previously mentioned and the implementation of a strategic program that coordinated wages and prices in order to curb inflation, which was successfully decreased to 20 percent by 1990 (Fraser 2010).

It is worth noting that the emphasis of the Mexican government on pursuing its economic development through the implementation of a policy reform scheme heavily orientated towards a free-market economy and the looseness of the government intervention, particularly to international trade, responded to the advice and pressure[110] of the developed neo-liberal economies and the International Financial Institutions (IFIs) based in Washington, D.C. (e.g. the International Monetary Fund (IMF), the World Bank (WB), and the US Treasury Department). These openly favoured a market-orientated rather than the old import-substitution economic philosophy[111] from the 1980s onwards (Shafaeddin 2006).

As expected, these free-market policies converged into the general economic reform of Mexico with outstanding outcomes towards the process of **trade liberalisation**. For instance, with the *liberalisation reforms* numerous trade barriers were removed, opening Mexico to worldwide trading as is reflected by the diverse commercial agreements signed with countries from North America, Latin America, the European Union, Japan and Israel. The *deregulation* and the *privatisation* reforms resulted in the withdrawal of the direct government intervention from approximately 3,000 economic sectors, of which the financial sector clearly failed to succeed. Although it could be argued that some important advances were reached with the liberalisation of the financial system, such as: (*i*) the elimination of interest rate controls, (*ii*) the removal of some restrictions on the convertibility of the Mexican currency (viz. the Mexican

[110] It is considered as a pressure since the implementation of these policy prescriptions most of the time are one of the conditions to be fulfilled for receiving economic rescue, such as loans from the International Monetary Fund and/or the World Bank.

[111] According to Shafaeddin (2006), it could be argued that the key argument that led the change from the previously dominant economic philosophy named import-substitution to a free-market orientated philosophy was to promote exports and private investment through a liberalisation in imports and a decrease in the intervention of the government in the economy. In other words, trade openness would lead to industrialisation, in the sense of ownership of high technology, improved skills and knowledge enhanced by trade and development. A noteworthy point here is that this philosophy assumes competitive and well functioning markets, but overlooks the fact that government performance might be prone to fail, with even larger probabilities when the government favours a populist regime.

peso), and (*iii*) the decrease of the required reserve ratio[112]; this process overlooked the need for establishing a proper regulatory framework for the Mexican banking system. All in all, the free-market reforms carried out might seemed to have "paved the way" for Mexico to become an open-market economy. However, they were not sufficient to put the country on a clear path to economic stabilisation and sustained growth, the *Tequila Crisis* of 1994 being a major setback from which Mexico, nevertheless, recovered strikingly fast.

In general, a banking crisis provokes uncertainty or even panic among investors. In emerging markets, however, uncertainty worsens as investors are not only concerned with losing their assets, but also purchasing power since most of the time there is a devaluation of the country's currency. Furthermore, the more volatile emerging markets are, the higher their political risk is reflected on their markets. For instance, at the beginning of the 1990s, investors were so wildly optimistic about Mexican liberal market reforms and its economic prospects that they failed to realise the structural inefficiencies existing in the Mexican banking system, which were about to originate a new credit crisis: the Tequila Crisis. Nonetheless, '*the tragic events of 1994'* were strong enough to cause panic among investors, which sent markets into a tailspin.

The episode known as *the Tequila Crisi*s took place in December 1994, when the Mexican banking system collapsed and left the country enduring the most severe devaluation of its currency. The Tequila Crisis was a banking crisis that had its seeds in the misuse of the excessive money injected into the Mexican economy via its financial markets as result of the unsuccessful liberalisation of the financial sector. It was however, detonated by the political events known as '*the tragic events of 1994'*, which took place during the first quarter of that year. During the first years of the 1990s, Mexico experienced an overflow of money, due to overconfident investors in the performance of the Mexican financial markets and the loans granted by the US banks. This excess of money caused Mexican banks to become international lenders. For instance, in 1992 three out of the 25 most profitable banks in the world were domiciled in Mexico, and one year after (1993) this number escalated to seven (Fraser

[112] In general, the reserve ratio can be defined as the amount of money that a bank must have set aside as collateral with the central bank for a given level of deposits. This ratio is established by the central bank of each country.

2010). However, although the banking sector had been recently liberalised and privatised, it had maintained important structural inefficiencies such as the lack of an efficient regulatory framework, which was openly reflected in (*i*) the absence of a central credit bureau to help lenders evaluate a borrower's credit worthiness and (*ii*) minimal regulatory oversight. This lack of a proper regulatory framework made the Mexican banking sector more prone to incur adverse selection, triggering its collapse.

In addition to the incomplete financial liberalisation reform, panic among investors was sowed, unleashing an exorbitant repatriation of capital flight because of the evident overvaluation of the Mexican peso. Since 1991, the Mexican peso was restricted to a band against the US dollar with its lower end set to decline by a small amount everyday in order to allow for a gradual depreciation. Even worse, the Mexican exchange rate was continuously hitting the higher end of this band, demonstrating its overvaluation. As an urgent measure to recover from these massive capital outflows, while defending the Mexican peso and fighting to suppress the coming financial crisis, the Mexican government used the national money reserves. These reserves, however, were not enough to handle this situation for very long and left the Mexican government in need of additional sources of financing. Billions of short-term bonds indexed to US dollars *(i.e. tesobonos)* were issued for this end, but this strategy left Mexico increasingly vulnerable to a liquidity crisis. On 20 December 1994, Mexican authorities widened the trading band of the Mexican peso by approximately 15 percent. Unfortunately this devaluation was not large enough to reassure investors, so the other alternative was to float the peso freely, which subsequently sunk immediately. With the Mexican peso plummeting and thus the value of the debt escalating severely, investors rushed to cash their bonds so worsening the problem. Paradoxically, the prompt economic recovery that Mexico achieved despite the magnitude of this banking crisis was astonishing, as the Mexican economy not only rebounded within one year, but grew steadily afterwards, averaging an annual rate around five percent during 1996 to 2000[113].

[113] Castañeda's research (2002 and 2007) provides other macroeconomic indicators that showed how the Mexican economy improved from 1994 to 2000. For instance: the current account deficit dropped 4.1 percentage points during this period, ending in 2.9 in 1999; (2) internal savings as a share of GDP rose 5.6 percentage points, reaching 20.3 percent by the end of 1999; and inflation was curtailed from 52 points to less than ten points from 1995 to 2000.

In this regard, Castañeda (2002, 2005 and 2007) contends that the two key factors which facilitated this recovery were the organisational structure of Mexican companies, viz. business groups also called networks, and the existence of an active internal capital market. Castañeda's research (2002, 2005 and 2007) documented that the Mexican economy was in a state of financial collapse in 1995 and it transformed into a state of steady economic recovery in 1996, this trend remaining until 2000, which is the last year encompassed by his research. The economic recovery was shown by the steady output growth that Mexico experienced from 1996 to 2000. These works demonstrated that, contrary to common expectations, during the financial crisis and afterwards (i.e. from 1995 to 2000) there was a decrease in the financial constraints of the Mexican listed companies. Castañeda (2002, 2005 and 2007) explicated this paradoxical evidence as a shift of the asymmetric information arisen in a context of financial disarray due to the utility of the organisational structure of business groups and the existence of active internal capital markets. The econometric evidence[114], nevertheless, only proved that a business group affiliation and/or a banking tie helped to decrease the cash-flow/cash-stock sensitivity to investment before the banking crisis, whereas afterwards these affiliations and/or ties did not register any significant effect on investments.

Moreover, the finding that Mexico experienced growth (meaning financing for real investment and production) during the late 1990s (despite the banking crisis of 1995 which allowed only limited new-issues of financial instruments through domestic money and capital markets) suggested that Mexican business groups helped to ameliorate[115] the financial constraints of their company members, rather than looking for the maximisation of the profits of each company individually. In this way they

[114] Castañeda analysed the financial behaviour of the non-financial companies listed in the Mexican Stock Exchange from 1990 to 2000 by testing the relationship between investment and cash-stock of 69 companies which formed the balanced-panel sample. These companies were divided into two categories: network or business group companies and independent companies. The period analysed – 1990 to 2000– was also divided into two main periods: the liberalisation period from 1990 to 1994, and the financial-paralysis period from 1995 to 2000. The latter period was subdivided into two sub-periods: the banking crisis sub-period from 1995 to 1996 and the steady recovery sub-period from 1997 to 2000. Because of the limited observations, particularly when macroeconomic indicators were tested, (e.g. the existence of internal markets backing the reduction of the cash-constraints during the period of financial paralysis) this research was not able to prove econometrically all the theories suggested, however it provided a deep qualitative theoretical analysis of all those hypotheses.

[115] Two common ways of assisting a constrained member are: (1) allocating the available funds of the business group (retained earnings) to cash-constrained companies with growth potential; and (2) facilitating their individual participation in capital markets (e.g. precluding that cash-constrained companies will be financing rationed) by acting as collateral, reputation hedge and risk-sharing.

modified the common role of asymmetric information[116]. In other words, the organisational structure of companies as business groups or networks might have facilitated the diminishment of the conflicts of interest between lenders and borrowers due to the exercise of control rights of the parent company of these groups. Furthermore, business groups might have contributed to the reactivation of the economy by supplying or reallocating funds to the companies that were cash-constrained and/or unable to access international markets (Castañeda 2002, 2005 and 2007).

It is noteworthy to point out that the use of business groups as an organisational structure of firms is controversial as this type of structure can either support or harm an economy (Castañeda Ramos 1999 and Khanna and Yafeh 2007). A simplistic view in this regard would contend that an economy might be favoured when business groups substituted for missing outside institutions in *pro* of a better market functioning; or might be harmed when business groups were used as a means to carry activities like exploiting or rent-seeking usually performed by majority shareholders. In Mexico capital markets are still incomplete, property rights flawed, and the law enforcement weak. In other words, it is an economy facing very large agency costs. It is possible that owners/managers were encouraged to use their business groups not only to stabilise aggregate profits, but also to generate internal capital markets. This might have helped to lessen the financial constraints of some of their affiliates.

As mentioned previously, economics and politics cannot be isolated from each other since a change in one affects the other. Therefore, at the time that Mexico was incorporating the processes of liberalisation, deregulation and privatisation into this new political economy, it was also restructuring its way of doing politics by embracing a *democratic transition process.* It can be said that this *transition process* commenced in the 1980s not as a single *'... idea, a preconceived scheme, or the project of any particular party*[.]*'*; but rather as a complex quest of the modern Mexican society for a formula which might politically represent equally the interest of all its constituencies, while fighting for both their individual and collective rights (Woldenberg 2002). It

[116] In general it would be expected that the information gap between lenders and borrowers might be widened in a context of severe financial disruption, where banking institutions failed and triggered the collapse of the formal capital markets.

could be argued that although the ultimate outcome of democracy was achieved by Mexico in 2000, when the result of the electoral process transformed the old populist *authoritarian "one-party"* system into a democratic *"multi-party"* electoral system, there are still significant issues to be addressed. These include poverty and new challenges to successes such as learning how to legislate effectively (i.e. governability and good governance) under plural conditions. Nonetheless, the achievement of political democracy fostered key changes in the political features of the Mexican political system. One of the most important of these is the decrease of the excessive power traditionally granted to the executive (i.e. president), which is commonly known as hyper-presidentialism, by redistributing and dispersing that political power at all three political levels: legislative, judicial and executive. Another is the assurance of the legitimacy of the vote and the fact that a democratic plural-party system would only be reached through voting. In fact, voting is a powerful instrument of change and the fundamental means for opposition forces to have a real opportunity (Molinar 2002).

According to Woldenberg (2002), the nature of the Mexican democracy transition process was **electoral** as the main changes that lead this process started within the electoral realm and spread rapidly to the other areas. First, there was the 1977 political reform that allowed the official registration of other parties. Then there was the creation of the Electoral Federal Institute (IFE, by its Spanish acronym) in 1990, in order to organise and monitor the elections, and corroborate the legitimacy of election outcomes. Further there was the establishment of a particular entry into the annual federal budget to transfer federal resources directly to the states and municipalities, this as a result of the privatisation of the Bank of Mexico, which gave it its autonomy from government, among others (Molinar 2002).

Due to this novel political environment, a new class of politicians entered the Mexican political arena. These politicians were characterised by having been educated at the best American universities and held the strong belief that economic stability was achieved through: low inflation, stable budgets, deregulated markets and free trade, in other words, through the use of liberal economics and its tenets rather than the principles of the populist regime applied previously. However, despite the advantages that a democratic regime offered, its *transition process* was rather a long and

multifaceted journey that witnessed two dreadful episodes known as '*the tragic events of 1994'*, which highlighted the need for Mexico to evolve into a democratic country.

The tragic events of 1994 refer to the southern revolt generated by the state of Chiapas on 1 January 1994 and the magnicide of Mr. Luis D. Colosio Murrieta on 23 March of the same year. Mr. Colosio Murrieta was the official candidate from the long-ruling party Partido Revolucionario Institucional[117] (PRI), and at the time of his death he was in the midst of his electoral campaign for the presidential elections of July 1994. It is worth mentioning that these two incidents have been considered as the detonators of the Tequila Crisis, even though the inefficiencies of the Mexican banking system were its main cause (Fraser 2010 and Masoni 2011).

The armed uprising of the state of Chiapas took place on the same day that the North American Free Trade Agreement (NAFTA) entered into force. It was led by the Zapatista Liberation Army (or EZLN by its Spanish acronym)[118]. It has been described as the outbreak of a long and complex conflict in the context of historical socio-economic injustice. The state of Chiapas, located at the south part of Mexico, was once considered unattractive or not profitable due to its lack of natural mineral resources such as gold, silver and precious stones. However, it has recently been recognised as one of the most resource-rich[119] states of Mexico (viz. petroleum). The characteristic feature of Chiapas is its ethnographic composition, which has been retained as its current population a high percentage of pure ethnic groups. Nevertheless, the conservation of these ethnic groups has made Chiapas fight against – and ultimately endure– severe exploitation, the cultural demise of its ethnic groups and the denial of their land rights by the ruling institutions and political parties. This has

[117] The Partido Revolucionario Institucional –PRI– (Institutional Revolucionary Party) was founded in 1929 by Plutarco Elías Calles, the former Mexican president. This party is said to be the centre-left wing party, but often thought of as *"the State party"* due to its incontestable status, at least until 2000, when the Partido Acción Nacional –PAN– (National Action Party) or the right-wing party, overcame it for the first time.

[118] The North American Free Trade Agreement (NAFTA) is an economic agreement involving the United States of America, Canada and Mexico. This agreement was signed on 17 December 1992 by US President George H Bush, Canadian Prime Minister Brian Mulroney and Mexican President Carlos Salinas de Gortari. Finally, NAFTA came into force on t 1 January 1994.

[119] According to Schmal (2004) the main natural resources of Chiapas are: the Lacandona rainforest, petroleum, hydroelectric power and Mayan archaeological remains. During the 1980s, Chiapas commenced the exploitation of petroleum, which ranked it as the fourth largest producer of crude oil and natural gas among the Mexican states, which are 31 plus a federal entity that is the seat of the federal powers. Further, as of 2004, 35 percent of Mexico's electricity was generated by Chiapas hydroelectric power.

been occurring since the Spanish colonial period beginning in 1522 when the Aztec Empire was conquered and dismantled by Hernán Cortés (Schmal 2004). Chiapas can be thus considered as a Mexican state where social and economic inequity has been emphasised during the last centuries, which is a paradox given its high contribution to the Gross Domestic Product (GDP).

In 1983 the EZLN commenced its formal involvement in the Chiapas conflict aiming to make public the socio-economic inequities existing in this State, with the plea that the Mexican government would work to improve the general situation of Chiapas. The EZLN arose as a *guerrilla group,* but acted in a rather peaceful way, mainly via sit-ins and marches. These actions however were dismissed by the Mexican government, so on the 1 January 1994 the EZLN declared war on the Mexican government and occupied four county seats in the state of Chiapas. At that time, its demands were: '*... work, land, housing, food, health, education, independence, liberty, democracy, justice, and peace'* (First Declaration of the Lacandon Jungle, cited in Sipaz 2000). After 12 days of war, the Mexican government unilaterally declared a ceasefire and started its dialogue with the EZLN but did not seem very keen to reach a satisfactory compromise for both parties as the Mexican government had underestimated the social and political influence that the Chiapas conflict might exert onto both, the Mexican economy and the international appreciation of this affair. According to Sipaz (2000), on 19 December 1994, the EZLN seized 38 county seats declaring them rebel autonomous municipalities by penetrating the siege imposed by the Mexican Army. From that moment the Mexican government became aware of the real magnitude of the effects of the Chiapas conflict. However, it was too late to halt its pervasive effects on the Mexican economy, which was already polluted with fear and rumours of political instability. Consequently, this conflict came to be one important unleashing factor of the *Tequila Crisis* of 1994.

Nonetheless, reflecting on the performance of the recent democratic political regime, it could be said that this regime also worked hard to bring democracy into the making-policy processes. The first and clearest example of this was the solution offered to end

the Chiapas conflict in 2000[120]: the amendment to Article II of the Mexican Constitution so that it grants diverse rights (mainly human and land rights) to Mexican indigenous people. The 2000 solution to the Chiapas conflict was the first national issue addressed by a multiparty Congress that did work in favour of all its constituencies by analysing and reforming a presidential proposal. This opened a new window for real and unprecedented change that was rapidly realised by domestic and international observers. For example, Stavenhagen (2002, p. 7) after assessing the performance of the Mexican democratic political regime and its performance, pointed out that Mexico was swiftly evolving by

> *'... strengthening democratic governance not only thorough transparent elections but also by managing constitutional, institutional and legislative processes in a formally democratic manner'.*

In recognition of the remarkable economic recovery and the stable economic growth achieved after the financial crisis of 1994, along with the level of democracy (e.g. political democracy) reached by 2000, during the first years of the twenty-first century Mexico was publicly acknowledged as a solvent and low-risk country by different financial credit-rating agencies. For instance, Moody's, Standard and Poor's and Fitch IBCA assigned Mexico an investment-grade rating[121] on its long-term foreign currency debt in 2000 and 2001 (Blázquez and Santiso 2004). This appraisal meant that Mexico succeeded in rectifying important socio-economic deficiencies, such as: the consolidation of Mexican exports, which was achieved by swapping its reliance from oil to manufacturing exports, the latter being relevant in volume and less volatile in price; a healthier financing of the Mexican external sector by increasing its founding from FDI rather than tapping from international debt; and *the practice of political democracy* which in 2000 materialised as the decoupling of its economic and the political cycles. Further, Blázquez and Santiso (2004) identified that in addition to these accomplishments, a structural reform with special attention to tax revenues was important for Mexico to foster sustainable economic growth. Alternatively, Shafaeddin (2004) argued that in order for Mexico to attain sustained economic

[120] As it has been previously mentioned, the presidential elections of July 2000 were won for the first time by the National Action Party (PAN, by its Spanish acronym), a right wing party which ousted the PRI from the Mexican presidency after 70 years of continuous rule.

[121] According to Blázquez and Santiso (2004) financial assets that are ranked with an investment-grade rating are considered to be low risk as they are associated with a low default probability.

growth, it would be necessary to implement an accurate industrial policy whose aim would be the upgrading and productivity enhancement of all industry sectors rather than only the labour-intense and resource-base industries, such as textiles and clothing. His research denoted that although Mexico experienced significant growth in the exportation of manufactured products (i.e. non-oil exports), this growth of exports was not associated with an increase in its GDP because of the lack of manufacturing added value. In other words, in order to reach sustained economic growth, Mexico needs to upgrade its export structure in such a way that it enhances the growth of both value added and GDP at a similar rate to that of exports.

Notwithstanding the lack of an accurate industrial policy (as Shafaeddin 2006 pointed out) or maybe because the lack of it, the trade liberalisation policy implemented by Mexico seemed to be the key factor driving the most striking results in the Mexican economy during the first years of the twenty-first century. Because of this liberalisation policy, Mexico shifted its main source of income from exporting petroleum to exporting manufactured goods. In other words, Mexico consolidated its worldwide exporter status, decreasing the volatility of its export income and attracting more foreign direct investment (FDI). Besides fostering the economic growth of the country, largely financed Mexico's current account deficit, this also contributed towards its *solvent and low-risk country* status (Blázquez and Santiso 2004). Some benefits that this status brought to the Mexican economy were: lower interest rates charged on public debit, higher market rates of return, more FDI, and last but not least, a decoupling from the other Latin American economies, in terms of economic vulnerability to contagion[122].

In regards to the external factors, Mexico have been described as

> *'...not only the main champion of trade liberalization, but also a champion of economic reform in general, including capital account liberalization and privatization'* (Shaffaeddin 2006, p. 47);

[122] For example, the Mexican economy was practically unaffected by the financial crisis of Argentina and Turkey according to Blázquez and Santiso (2004).

Or as a keen pioneer in the world's globalisation process when defining ***globalisation*** as *'...the process of increasing interaction, both between and within countries, of ideas, information, capital, goods and services, and people'* (Heyman 1999, p. 5).

Furthermore, Mexico was *'... the most important country in the globalization thrust of the Spanish Empire which began in 1492, and the most important country to declare independence from Spain in 1810. Its 1910 revolution was a precursor of the Russian Revolution of 1917'*, as Heyman (1999, p.16) denoted. Nonetheless, it could be fairly argued that the appearance of *emerging markets* might be the aspect of globalisation with most relevance to the Mexican economic and financial environment.

After World War II, Mexico remained as an active member of the globalisation process by becoming a member of the World Bank and the International Monetary Fund, which were founded in 1945. During the late 1970s and as result of the oil boom, Mexico was one of the most important recipient countries of *'petrodollars'* (by means of its foreign debt), detonating in this way the financial crisis of 1982. Nevertheless, Mexico was also the first country to emerge from this crisis due to the implementation of the Brady Plan in 1989.

It was during the 1980s that the process of globalisation spread widely and came to be represented by the ideas of free market clearly supported by the main developed countries (e.g. The United States of America and The United Kingdom), as previously discussed. Consequently, during this time Mexico implemented a key set of economic and financial policies pursing its economic development and growth through the processes of liberalisation, deregulation, internationalization and privatisation. Some of the main actions to achieve this process were as follows. In 1986 Mexico signed its entrance to the General Agreement on Tariffs and Trade (GATT) –precursor of the current World Trade Organisation (WTO) – and began the deregulation of the Foreign Direct Investment, which was further intensified in 1989, 1993 and in 1999 when the FDI in services was liberalised completely. In 1989 Mexico also opened its first foreign portfolio capital establishing the *Nafin Trust.* On 1 January 1994 the North America Free Trade Agreement (NAFTA) was implemented. In April of that same year Mexico became a member of the Organisation for Economic Cooperation and Development (OECD). In July 2000 an Economic Partnership, Political Coordination

and Cooperation Agreement between the European Union and Mexico entered into force. Finally, in January 2005 a free trade agreement between Mexico and Japan was implemented (Fraser 2010, Heyman 1999, and Shafaeddin 2006).

In conclusion, Mexico can be thought to be the champion of the emerging countries in transforming its political economy by implementing a comprehensive policy-reform scheme that included most of the recommendations made by the neo-liberal countries and advocates of the Washington Consensus. These reforms targeted the whole economy, but focused mainly on the trade liberalisation process. Consequently, Mexico can also be considered as one of the most globalised emerging markets, with sophisticated financial markets, both inside and outside of Mexico, and a significant foreign participation in them. For example, by the end of 2000, Mexico was the eighth largest exporter in the word and the second trading partner of The United States of America (Castañeda 2002).

Further, according to the assessment carried by Wilson and Stupnytska (2007) and Wilson *et al*. (2010), Mexico along with Korea and Turkey were categorised as one of the three biggest economies of the N-11. This classification means that Mexico is considered to be an economy where *'... incomes and development levels are already quite high, growth conditions are in relatively good shape and the challenge is,* [therefore,] *to maintain and improve the conditions that will allow them to complete the catch-up with the world's richest economies'* (Wilson and Stupnytska 2007, p.14). Moreover, Wilson and Stupnytska (2007) carried an economic analysis driven by the factors[123] comprised in the GES with data as of 2006, and their results demonstrated that Mexico stood above the mean of the rest of the emerging economies on all the factors apart from investment. Mexico, when its performance was assessed in terms of the five areas into which these 13 factors are grouped, ranked particularly well on human capital and macroeconomic stability but poorly in macroeconomic conditions and technology. Further, the findings from a financial analysis carried by O'Neill *et al*. (2010) who used data as of June 2010 to test the financial development score,

[123] The GES is divided into five different areas which include thirteen economic factors altogether. The detailed classification of this score is as follows. 1. Macroeconomic Stability comprises: (*i*) inflation, (*ii*) government deficit, and (*iii*) external debt. 2. Macroeconomic Conditions includes (*iv*) investment and (*v*) openness. 3. Human capital is formed by: (*vi*) education and (*vii*) life expectancy. 4. Political Conditions encompass: (*viii*) political stability, (*ix*) rule of law and (*x*) corruption; whilst 5. Technology, (*xi*) personal computers, (*xii*) telephones and (*xiii*) Internet.

highlighted the fact that Mexico is not only one of the three biggest economies of the N-11, but is already also financially more developed than the smaller N-11 economies. However, it underperformed for its current level of financial development. This underperformance suggested that Mexico has not fully exploited its potential to become even stronger in terms of the size, depth and efficiency of its financial markets yet. Finally, it is also important to mention that country-specific factors are highly likely to drive countries' outperformance/underperformance. For instance, the underperformance of Mexico could be the result of its relative higher exposure to global financial markets and, particularly, to the fact that its monetary and financial aggregates may be depressed due to the overshooting of the Mexican Peso relative to the US Dollar.

2.4.3 Corporate Governance Practices in Mexico

After analysing the roots and key components of the current political economy of Mexico, this last section examines the main features of the corporate governance policies and practices in Mexico. It discusses the key improvements achieved towards better corporate governance practices and points out the main challenges that remain.

Although corporate governance is currently a widely investigated area, it was not until the first years of the twenty century that a little knowledge regarding the corporate governance practices in Mexico started to emerge. This delay was probably due to the great difficulty in obtaining relevant corporate information, a complication that worsens when comparability was also sought between that corporate information.

Initial research contended that the corporate governance system of Mexican companies was representative of the insider model. According to Nestor and Thompson (2000, cited by Husted and Serrano 2002, p. 338) the corporate governance systems among the main OECD countries were structured following either the internal model or the external model. The particularity of the internal model is that its corporate governance body is mainly formed and directed by insider members, such as the bank-centred or the family-centred systems like those of Japan or Germany and most Latin American

countries respectively. In contrast, the external model is characterised by having a corporate governance body composed mainly of outside members or investors like the ones of the USA and the UK. This statement looks appropriate when analysing the main features of the corporate governance system in Mexico, which Husted and Serrano (2002, pp. 338-339) summarised as: *'... (a) concentrated equity ownership, (b) de facto subordination of shareholders interests, (c) a weak emphasis on minority interest protection in securities law and regulation and (d) relatively weak requirements for disclosure'.* Furthermore, Husted and Serrano (2002) pointed out the peculiar practice of most publicly traded Mexican companies of appointing a chairman as the leading member of the Board of Directors (BOD) (which under Mexican law is the body responsible of the governance of the companies) instead of combining its functions with the ones of the chief executive officer (CEO), as most companies from the rest of the world do. This situation highlights the fact that the Mexican corporate governance system is a family-centred one. It grants preferential treatment to the founder-family members in the corporate voting-processes, as the chairman position is often a post held for life (even after retirement) given to the founder shareholders, leaving in this way the CEO position usually to a younger member of the family.

Other common practices that depicted the corporate governance system of large Mexican companies until the last years of twentieth century are the following. Mexican BODs were integrated mainly by large/majority shareholders rather than by a balanced mix of internal and external members appointed proportionately by majority and minority-shareholders. This situation prevented the monitoring of minority shareholders' interests. There was an extensive use of pyramids and dual-class shares by majority investors[124], a situation that not only helped the concentration of ownership but ultimately deepened the discrepancy between control rights and cash-flow rights. Cross-shareholding and exchange of positions in the BOD among associated entrepreneurs were also frequent practices that fostered the participation of majority shareholders in the decision-making process of the related companies, besides monitoring and reinforcing their political and economic alliances (Babatz Torres 1997, Castañeda Ramos 1999, La Porta *et al.* 1999, Husted and Serrano 2002). It could be argued that the overlap between majority shareholders, the members of the BOD and

[124] In the case of Mexico, majority investors are commonly the founder-family members or close groups of investors, as chapter 5 will demonstrate.

the CEO could be favourable since it might help to diminish some agency problems by keeping their interests aligned. Nevertheless, in the case of Mexico it seems more likely that the main reason for this overlapping practice was so that majority/large shareholders could benefit from the unequal distribution of cash-flow rights and control rights between shares and the lack of representation of minority-shareholders' rights. This reduced the cost of capital[125] for them at the expense of companies' value.

Additionally, since the early nineties, large Mexican companies started the issuing of American Depository Receipts (ADRs), Ordinary Participation Certificates (CPOs, by its Spanish acronym) and neutral funds[126] in order to tap foreign financial markets, benefiting from the fact that these financial instruments only entitle cash-flow rights. It is important to explain that by law, limited and/or no-voting shares are not allowed to be issued by Mexican companies. Nevertheless, because of the enactment of the Foreign Investment Law (FIL) in 1993, that spirit of the law was violated allowing companies trading in the Mexican stock exchange to issue up to 25 percent of their total stock as limited or no-voting shares. The FIL aimed to distinguish between domestic and foreign investment in order for the Mexican strategic economic sectors to be protected from being controlled by foreign investors. To this end, the FIL divided the publicly traded companies into three different categories; *(i)* companies in strategic sectors where foreigners could not invest at all, such as petroleum and the other hydrocarbons, electricity, generation of nuclear energy, radio and television, motorways, sea and air transport, and banks among others; *(ii)* companies where foreign investors could own less than 49 percent of the total capital stock (i.e. automotive parts, secondary petrochemicals, and mining activities among others); and *(iii)* the rest of the companies which allowed foreign investors to own up to 49 percent of the total capital stock (Mexico 1993). Even though this law was not enforced until 1993, the Mexican government had long since been concerned by the need for external sources of financing, so that starting in 1989 it tried to foster foreign financial investment through the creation of "neutral" investment mechanisms such as the

[125] Since in Mexico there is a pronounced divergence from the one-vote-one-share rule –the majority shareholders being the main keepers of the voting capital stock– the issuing of dual-class shares allows majority shareholders to invest small amounts of money and actually control the company, transferring in this way the risk of the capital (projects) to minority shareholders, who are the ones holding most of the non-voting capital stock.

[126] It is noteworthy that both financial figures benefit controlling shareholders since their titles usually have to be voted as the majority does.

CPOs, the ADRs and the neutral funds. These three financial instruments were known as *neutral investment stock* since they grant only cash-flow rights in order for foreign investors to be allowed to acquire additional Mexican stock without surpassing the limits established by the regulations of foreign investment (Babatz Torres 1997). All in all, one could argue that the issuing of dual-class shares is a common practice of Mexican publicly traded companies. However, before 1990 this practice was used as a strategy to compensate for the lack of a good corporate governance system (i.e. concentrated ownership), whereas after 1990 it was used to depart from the one-share-one-vote rule to expropriate the voting rights from foreign investors.

It is important to notice that afterwards, the Mexican government realised that the ultimate implication of the allowance regarding the issuing of limited or no-voting rights shares was flawed as it helped entrench current large shareholders (who happen to be family/founder shareholders) by easing their ownership concentration while deepening the voting power. Therefore, the Mexican government tried to reverse this allowance by limiting the instances when a company can issue limited and no-voting shares via the amendments to the Stock Market Law (LMV) enacted in 2005. However, this limitation could not be applied immediately to the current large publicly traded companies.

Last but not least, it could be said that there is no market for corporate control in Mexico as the stocks traded represent only a small part of the total capital of companies and the majority of them are non-voting right stock (Husted and Serrano 2002, Lopez-de-Silanes 2002 and Chong *et al.* 2009). Following the legal approach, a small and narrow financial market, such as that of Mexico, can be explained as the result of poor and weak legal and enforcement systems. In other words, in countries that offer vague protection to investors and creditors, the development of their financial markets is restrained due to the reluctance of minority shareholders to pay high prices for stock granting rights that have a high probability of being expropriated, and also because of the unwillingness of creditors to lend money at low interest rates due to the uncertainty of recovering their investment (La Porta *et al.* 1999, Lopez-de-Silanes 2002 and Chong *et al.* 2009).

In Mexico, corporate governance is directly legislated though two principal bodies of law, the Mercantile Companies Law (LGSM by its Spanish acronym) enacted in 1934 –also known as the Business Corporation Act– and the Stock Market Law (LMV by its Spanish acronym) enacted in 1975 –also known as the Securities Exchange Act. The former is the main and the most general law that deals with most areas of any limited liability company including its incorporation, the issuing of shares, the share-ownership rights, the rights and duties of the board of directors and auditors, and the general procedures for merges and liquidation. The Stock Market Law and the general rulings issued by the National Banking and Securities Commission establish particular provisions for companies which are publicly traded on the Mexican Stock Exchange (MSE or BMV by its Spanish acronym). Finally, there is a code of Best Corporate Practices issued in 1999 by the board of Mexican leading entrepreneurs, aiming to clarify the corporate governance practices that all companies are expected to follow[127].

Research on legal systems[128] proposes that the degree of protection of investors and creditors and the level of legal enforcement can be determined through the origin of the legal system of the countries. Empirical evidence has demonstrated that countries whose legal systems are similar to common-law offer stronger legal protection and a higher level of law enforcement than those offered by countries whose legal systems are drawn from the civil-law (La Porta *et al.* 1997, 1998 & 2000; Lopez-de-Silanes 2002 and Chong *et al.* 2002). The Mexican legal system happens to follow the patterns of the French civil-law system, which has been demonstrated empirically to be of the family[129] of the civil-law origin countries that grant the lowest levels of investors and creditors' protection and law enforcement. Empirical evidence from Mexico supports these findings as Mexico has shown to offer poor rights not only to investors but also to creditors, besides having a poor level of legal enforcement (La Porta et al. 1999, Kappler and Love 2002, Lopez-de-Silanes 2002 and Chong et al. 2009). Furthermore, Babatz Torres (1997) Castañeda Ramos (1999) and Husted and Serrano (2002) research found that Mexican corporate governance legislation suffered

[127] Section 4 of Chapter 3 of this thesis provides a detailed assessment of the content and implications of the aforementioned laws and their amendments.
[128] A comprehensive examination of the legal systems research was already offered in the Section 2.1.2 Ownership Structure and Legal and Regulatory Systems of this chapter.
[129] The civil-law tradition which derives from Roman law has three different families: *(i)* the French family that is based on the Napoleonic Code of 1984; *(ii)* the German family based on the Bismarck's Code of 1804; and *(iii)* the Scandinavia family which is the less similar to the civil law but different from the other two civil-law families (Lopez-de-Silanes 2002).

from lack of disclosure standards of corporate information, weak protection of minority-shareholders rights and some encouragement of issuing dual-class of shares in the form of non-voting shares for foreign investors.

According to Babatz Torres (1997 p. 2), any corporate governance legislation *'...aims at solving agency problems* [e.g. the separation of ownership and control problem] *through rules and active court involvement that ensures* [at least] *a minimum degree of protection of interest of outside investors'.* Therefore, countries with loose investor and creditor rights should look to define and closely comply with good corporate governance practices in order to ameliorate the mis-functioning of their legal systems and consequently provide a fair and trustful business environment which would foster their economic growth. In fact, it has demonstrated that there is a positive relationship between the firm-level of good corporate governance practices and the valuations of the companies, their performance, and the payout ratio of dividends (Kappler and Love 2002, Lopez-de-Silanes 2002 and Chong *et al*. 2009).

Mexico, being aware of its lax law system and its weak level of legal enforcement, launched a complex policy-reforms process aiming to achieve macroeconomic stability and economic development. The first aim was attained by the end of the last decade, but in order to reach economic development it is necessary to start an institution-building process which will develop Mexican financial institutions and its legal infrastructure to support business, in addition to creating regulatory mechanisms compatible with the best world practices (Lopez-de-Silanes 2002 and Chong *et al.* 2009). According to Coffee (1999, cited by Lopez-de-Silanes 2002 p.15) to achieve a successful institution-building process, it is necessary to implement a set of reforms that will share the same aim but will be approached under two different perspectives: the legal convergence and the functional convergence. In the words of Lopez-de-Silanes (2002, p. 15), the main difference between legal and functional convergence is the following:

> *'Legal convergence refers to the changes in the rules and in enforcement mechanisms toward some desirable standard... Alternatively, functional convergence refers to more decentralized, market-based changes, which do not*

require legal reform per se, but still bring more firms and assets under the umbrella of effective legal protection of investors'.

It is important to note that these reforms are not substitutes but complements. Therefore, both types of reforms need to be applied at the same time to build the institutions and mechanisms needed to set up a self-sustainable capital market. In this sense, it is clear that Mexico needs to improve the protection offered to outside investors and creditors at both levels, nationally (viz. the legal system) and the individually e.g. at company level. Borrowing Coffee's approach, Mexico is dealing with the functional convergence by listing Mexican stock in Stock Exchanges that perform under more protective legal systems such as the USA or the U.K., while working to achieve legal convergence by reforming its corporate legislation[130].

It is of note that the process of reforming the Mexican corporate legislation has faced significant objections from controlling shareholders. According to Lopez-de-Silanes (2002) there are two possible reasons for this opposition. First, for controlling shareholders an improvement in the investor's rights might mean a reduction in control and in the private benefits they used to obtain from companies. Second, controlling investors might not favour the development of Mexican capital markets, as large Mexican companies seemed to be able to finance their investment projects through either internal cash flows or loans provided by their tied banks. Fortunately, despite the opposition, and as the slow and difficult as a serious legal reform process can be, Mexico has started the process of reforming its corporate legislation. A successful example is the amendments implemented to the LMV in 2005.

Further, it could be said that Mexico is demonstrating its real interest in becoming a developed economy with standards close to those of the best economies. An example of its commitment is the issuance and implementation of the code of Best Corporate Practices, which made Mexico the first Latin American country with such regulations. The main deficiencies in the corporate governance practices overcome by the implementation of this code are: the balanced composition of the BOD; the specification of the independent nature of the audit committee which ensures the

[130] These reforms are thoroughly explored in next chapter; chapter 3 section 3.4.1 *'Corporate Governance Legislation in Mexico'.*

objectivity of judgment of its members; the establishment of a committee of compensation and evaluation; and the disclosure requirement of compensation schemes for executives. However, there still many areas that require improvement like the need to define the responsibilities of the directors or the continuing vagueness in the disclosure requirements. It is worth mentioning that the market has already noticed the improvements in corporate governance practice at company level, rewarding those companies with higher valuations, less expensive financing and better opportunities for investment allocation (Kappler and Love 2002, Lopez-de-Silanes 2002 and Chong *et al.* 2009).

2.5 Summary

Existing research documents that corporate ownership structures are different in developed and emerging economies. It demonstrates that corporate financing decisions influence the cash-flow rights and control rights of the securities issued by companies differently; and that corporate ownership and capital structures can be decisive mechanisms to increase company value and investors' wealth, when chosen wisely. An optimal selection of these structures, however, is proving to be rather complex to determine since numerous factors are involved and concern not only the legal and economic generalities of the country where the company operates (external factors), but also the particularities of the company itself (internal factors). These external factors are: the type/tradition of corporate governance; the origin of legal and enforcement systems; the economic development of the country, its markets and institutions; and the culture and the psychology of investors. The internal factors are: the private benefits of control, corporate charter provision and corporate governance practices.

The realization that separation of ownership and control ought to give rise to conflicts of interest between the interested parties led scholars like Grossman, Hart, Harris, Raviv and Stulz to analyse the effects of the differences in cash-flow rights and voting rights. Grossman and Hart (1988) point out that a voting-security structure can be used as a mechanism for shifting corporate control. Further, the assignment of voting-rights might help to determine the *'type of party'* (private benefit party or security-benefit party) that will have control. Harris and Raviv (1988) argue that governance rules affect company value since they can influence the proportion of private benefits to be extracted from the winner contestant in a takeover bidding process. Finally, Stulz (1988) discusses the proposition that the proportion of voting rights held by managers might alter the market valuation of companies.

In 1999 a legal and enforcement system approach was pioneered by La Porta *et al*. They propose that ownership structure might act as a substitution mechanism when low degrees of protection for investors and creditors and weak law enforcement are present, as only large shareholders can safely expect to receive a return on their

investment. Further, according to this approach, French-civil law origin countries (i.e. most emerging countries) present the lowest levels of protection to shareholders and creditors, and the lowest levels of law enforcement. Alternatively, Gilson (2005) offers a different view for the legal approach contending that law in terms of its functionality could offer a better framework to classify ownership structures into efficient and inefficient controlling shareholders systems. Further, he emphasises that the analysis of the effects of private benefits of control in corporate ownership patterns may offer a more complete explanation of these patterns as these benefits incorporate the effects of the particulars of each country.

Initial empirical research on ownership suggests that corporations are widely-held in the USA between their investor and that managers were in charge of the administration of those companies (Berle and Means 1932, cited by La Porta *et al.* 1999, p. 471). However, contemporary empirical evidence does not support this view, demonstrating instead that concentrated ownership structures exist in most countries and that shareholders are active in corporate governance. Furthermore, controlling structures exist in several large companies, except to those with efficient legal and enforcement systems, particularly the USA and the United Kingdom. Moreover, for the most part, families are the ultimate controlling shareholder with control rights in excess of their investments, and also are often involved in the management of companies (La Porta *et al.* 1999). In the case of emerging countries empirical evidence supports the theoretical assumptions regarding their expected ownership patterns, showing highly concentrated ownership structures owned mainly by family groups and a great divergence from the one-share one-vote rule achieved mainly through the use of pyramids and/or cross-share holdings, the issuance of dual-class of shares, and/or the application of super majority rules.

Borrowing the spirit of Bebchuck's model (1999) and considering previous assumptions regarding the determinants and patterns of ownership structure in emerging markets, the findings regarding the importance of a voting-security structure to allocate control, along with the findings regarding Mexico and its economic-political background and governance practices, I develop a game-theoretical model of '*Separation of Control Rights and Cash-Flow Rights in Emerging Economies, Theory and Mexican Evidence'* presented in chapter 3.

On the capital structure account, ever since the transcendental irrelevance model published by Modigliani and Miller in 1958, advances on this field have identified additional determinants of capital structure such as: taxes, bankruptcy costs, agency costs, information asymmetry costs, product market, and patterns of ownership, among others (Modigliani and Miller 1963, Jensen and Meckling 1976, Miller 1977, Ross 1977, Myers and Majluf 1984, and Harris and Raviv 1991). Moreover, alternative theories, such as the Static Trade-Off theory, the Market Timing Theory, the Signalling theory, the Pecking Order theory, and the Agency theory framework have been also elaborated to explain the optimal capital structure by explicating the behaviour of these determinants on the different corporate financial choices. Nonetheless, there is not yet a theory complex enough be able to account for all the factors behind the possible optimal capital structure. This is because, firstly, it has been recognised that in addition to determinants identified already, there are other determinants related to country particulars (e.g. inflation, country risk and culture) and firm-specifics (e.g. accounting practices, corporate governance practices and organisational structure) that also need to be addressed. The second reason is that those country and company determinants can generate very particular influences in the corporate financial decisions, particularly when emerging countries are analysed (Glen and Singh 2004 and Booth *et al*. 2001).

Initial empirical evidence on capital structure came mostly from studies of the determinants of corporate debt ratios of American companies. Soon after empirical research with a broader scope and samples emerged, leading to the investigation of the corporate financing choices of issuing debt and equity and carry out cross-country analyses. Leading investigations like those carried by Rajan and Zingales (1995), Boot *et al*. (2001) and Glen and Singh (2004) verify that the same key determinants identified in the USA companies apply to companies operating in countries of similar economic development (viz. the G-7) and in emerging markets, respectively. Rajan and Zingales' (1995) evidence documents that, on average, the G-7 companies hold similar levels of leverage and that their financing choices are influenced by the same determinant in a predicted way. Boot *et al*. (2001) and Glen and Singh (2004) demonstrate that capital structure decisions are affected by the same determinants in both developed and emerging countries, although the behaviour of some of those determinants in emerging countries is different from the one expected (e.g. sign and/or

size of the coefficients). Further, there are persistent differences across countries revealing the importance of country factors.

Bringing together the previous theoretical predictions of capital structure and following the framework and methodologies used by Rajan and Zingales (1995) and Booth *et al*. (2001) I firstly investigate empirically the effects of well-known firm-specific determinants in capital structure of the Mexican publicly traded companies in chapter 5 '*Empirical Research: Determinants of Capital Structure of Mexican Publicly Traded Companies'*. Secondly, the effects of market power were tested. I conclude the chapter with the analysis of the effects of separation of ownership and control in capital structure. To this end, my theoretical findings regarding ownership structure, corporate governance practices, business groups and the economic-financial background of Mexico were incorporated.

Preliminary research on business groups closely associates business groups with emerging markets as a result of their ownership patterns, organisational structures and governance practices. New literature has, however, demonstrated that business groups are also an efficient answer in contexts where there is/are: informational and institutional failures; capital, labour and managerial inefficient markets; technology borrowing and economies of scale (Castañeda 2007, Khanna and Yafeh 2007, Langlois 2009 and Schneider 2009).

Additionally, it has been also documented that business groups are predominant in emerging economies, but that they do also exist in developed countries. The two organisational forms of these groups are horizontal diversification and pyramidal structures, although frequently they combined both (Colpan and Hikino, 2010). Further, business groups in emerging markets are predominantly set up as diversified groups with clear patterns of family-controlled structures, often exercised through pyramids and other mechanisms (dual-class shares and/or cross-share holding, *et cetera*.) that enable control rights in excess of cash-flow rights. Moreover, pyramidal business groups remain widespread in mature market economies that are equipped with strong legal and market institutions supporting the functioning of capital markets. Therefore, besides or even without the existence of a direct economic benefit from profit tunnelling, controlling shareholders may also extract private benefits in terms of

social, political and economic gains from invisible assets like group reputation and prestige, political connections, *et cetera* (Colpan and Hikino, 2010).

Alternatively, a sociological perspective argues that business groups are formed because the use of social ties bound by trust diminishes costs, such as those related to agency conflicts, contractual inefficiencies and information asymmetries. Further, Khanna and Yafeh (2007, p. 348) notice that business groups are ubiquitous in emerging markets and the majority are family controlled; a fact that evinces *"... business groups are networks whose prevalence facilitates the creation of trust, which makes up for incomplete contracts and imperfect rule of law"*.

The game-theoretical model presented in chapter 4 '*Mexican Business Groups, Empathy and Market Crashes'* models the theoretical arguments provided regarding the positive side of business groups in interaction with empathy. This model is close to the spirit of Castañeda's (2007) model, benefiting from my findings regarding the Mexican economic-politico features and governance practices. It offers a novel theoretical and numerical analysis of the role of empathy in the creation of a business group.

Focussing on Mexico, earlier literature has depicted it as an emerging country endowed with problems of high foreign debt and inflation (as result of the LAPGs) and with immature markets, inefficient legal and enforcement systems, agency and informational asymmetry problems and poor governance practices. However, contemporary literature has documented the drastic changes carried in its economic and political arenas from the early 1990s, which have resulted, among other things, in the consolidation of Mexican exports; a healthier financing of Mexican external sector by increasing its founding from FDI rather than tapping from international debt; and the practice of political democracy which in 2000 materialised as the decoupling of its economic and the political cycles.

Moreover, new research analysis provides promising insights identifying the potential of Mexico to evolve into an economy comparable to those of the G-7 in terms of a source of sustained growth and global demand. Further, it has been pointed out that Mexico, together with the BRIC countries and Korea, should not be considered as

standard emerging markets because of their influence on the global economy. In the words of O'Neill (2007, p. 5) *'... Mexico, the four BRIC countries and Korea should* ...[be] *regard*[ed]... *as a critical part of the modern globalised economy, and they are just as central to its functioning as the current G7 is'.*

Finally, Mexico is demonstrating its ongoing commitment to pursing economic development and political democracy, not only by having been immersed in a complex politico-economic policy reform process (which went beyond macroeconomic stability), but also by commencing the institution-building process which lately has been considered as a key factor in consolidating economic development (Lopez-de-Silanes, 2002 and Chong *et al.,* 2009). It is expected, therefore, that the institution-building process will enable the Mexican economy to overcome the deficiencies of its current legal and enforcement systems and the flaws in its current corporate governance practices.

Chapter 3

Theoretical Model: Separation of Control Rights and Cash-flow Rights in Emerging Economies: Theory and Mexican Evidence

This researcher wants to mention that this chapter is a joint-work with Dr. R. Fairchild and has been published in the Journal Corporate Ownership & Control, volume 5, issue 1.

As discussed in the literature review Chapter, researchers have identified that corporate ownership structures are quite different in developed and developing economies. For instance, Castañeda Ramos (1999) provides evidence of considerable separation of cash-flow rights and control rights accruing to inside and outside equity-holders in publicly listed firms in Mexico. Insiders use mechanisms such as dual voting rights, majority rules and pyramids to maximise their control rights while holding minimal cash-flow rights. In contrast, there is a much closer alignment of cash-flow rights and control rights in developed countries such as the UK or US.

In this chapter, a game-theoretic model is developed aiming to explain these features. I argue that factors in emerging markets, such as large private benefits of control, extreme risk, low investor protection, inefficient capital markets, and governments sympathetic to incumbent management at the expense of outside investors, all contribute to insiders' incentives to create a separation of cash flow and control rights. Finally, some evidence from Mexico is presented supporting the results.

3.1 Review of Literature

An emerging area of research in international corporate finance analyses the effects of the various legal and corporate governance systems around the world on capital market development, and firms' financing choices and ownership structures. For example, La

Porta and his co-authors have studied the effects of the legal system and shareholder protection on the development of capital markets (1997), dividend policies around the world (2000), the concentration of equity ownership (1999), and the relationship between investor protection and corporate governance (2000).

Some researchers (for example Bebchuk 1999, Castañeda Ramos 1999, Burkart and Panunzi 2006) have identified that corporate ownership structures appear to be quite different in developed and developing economies. For instance, Silva *et al*. (2006) and Carvalhal Da Silva and Câmara Leal (2006) agree that an important feature of the ownership structure in emerging markets may be their high concentration of ownership and control. Hence, there is a clear departure of the rule one-share one-vote and an intensive use of indirect ownership mechanisms (e.g. pyramids, cross-holding shares and non-voting shares, among others) to leverage control.

Castañeda Ramos (1999) identifies that there is considerable separation of cash-flow rights and control rights accruing to inside and outside equity-holders in publicly listed firms in Mexico, with a high concentration of control rights in insiders' hands. Insiders use mechanisms such as dual voting rights, majority rules and pyramids to maximise their control rights while holding minimal cash-flow rights. In contrast, there is a much closer relationship between cash-flow and control rights in developed countries such as the UK or US.

The main focus of this model is to analyse this phenomenon in emerging markets, with particular reference to Mexico. According to Bebchuk (1999), '*the incidence of concentrated and dispersed ownership varies greatly around the world. This is the case even among countries in a similar stage of economic development. Whereas dispersed ownership is the dominant form in the United States and the United Kingdom, control blocks are dominant in the countries of continental Europe.*'

Early capital structure research ignored control rights, instead focussing on cash-flow rights associated with securities such as debt and equity. For example, in Jensen and Meckling's (1976) capital structure model, a leverage-increasing change in the financial structure of the firm increases the manager's equity-stake. This increase in

his cash-flow rights reduces his incentives to divert company funds towards his own private benefits, hence aligning his interests with those of outside equity-holders.

Recently, it has been recognised that the financial structure affects both cash-flow rights and control rights. An increase in a manager's equity stake may increase his value-adding incentives as he has more of the cash-flow rights (as in Jensen and Meckling 1976), but it may also enable him to increase his control rights, since equity confers voting rights. This may reduce corporate control, and may enable the manager to become entrenched, which may induce value-reducing behaviour. Miguel *et al*. (2005) find a quadratic relation between the performance of Spanish firms and their level of ownership concentration, its break points being 35 and 70 percent. Silva *et al*. (2006) find in Chilean firms a cubic relationship between ownership concentration, performance and business affiliation[131], with break points at 21 and 76 percent. It is of note that these values are consistent with the critical values of ownership stated in Chilean law.

A company's corporate charter establishes governance rules, such as the allocation of voting rights to equity-holders and the majority required to oust an incumbent in the face of a take-over threat. In terms of the former, a company may establish a structure in which all share-holders have equal voting rights (a 'one-share one-vote' rule), or they may issue dual classes of shares, with differential voting rights. Indeed, in Mexico, firms are legally allowed to issue at most 25 percent of their total capital as non-voting equity. In terms of majority rules, the charter may establish a simple majority (the rival in a take-over bid simply requires more than 50% of the votes to succeed), or it may establish a super-majority rule (such as the rival requires more than 75% of the votes). Hence, these charter provisions affect the disciplining role of the market for corporate control by determining the ease with which hostile take-overs may be successful.

Seminal theoretic approaches to the differences in cash-flow and control rights have been provided by Grossman and Hart (1988) and Stultz (1988). They consider the effect of dual class of shares and supermajority rules on managerial ownership

[131] Business affiliation is analysed in terms of family ties and interlocking of directorates.

structure and incentives in the face of take-over threats. Recently, Bebchuk (1999) considers managerial incentives to retain a controlling block of equity in the face of take-over threats.

There has been some theoretical work (e.g. Grossman and Hart 1988, Harris and Raviv 1988, Stultz 1988, Israel 1992 and Bebchuk 1999) examining the effects of corporate charter provisions on corporate control and performance. For example, both Grossman and Hart (1988) and Harris and Raviv (1988) consider the optimality of simple majority and one-share one-vote rules. In both papers, a conflict of interest exists because the corporate insiders enjoy both cash-flow and private benefits from running the firm, while the outside equity-holders only enjoy the income benefits. The corporate charter rules affect the bid price that a rival would be willing to pay, which in turn affects the value of corporate securities. Harris and Raviv provide two major results; the simple majority rule plus one share-one vote is an optimal governance scheme since the better management team is always elected. However, this does not generally result in maximum security values. In Grossman and Hart's (1988) analysis, the optimality of simple majority and one-share one-vote rules depends on the relative levels of private benefits enjoyed by the incumbent and the rival from controlling the firm.

Stultz (1988) develops a model that considers the effects of the incumbent's equity stake (and hence his share of the votes) on the premium offered by a bidder in a take-over contest. He establishes a non-monotonic (inverted U-shaped) relationship between the manager's equity stake and firm value. Stultz assumes a simple majority rule, and one-share one-vote.

Bebchuk (1999) considers a risk-averse incumbent's equity-issuance decision at Initial Public Offer (IPO), in the face of a future take-over threat form a rival. Risk-aversion means that the incumbent would wish to issue a large amount of equity, and reduce his equity stake as much as possible. However, placing large amounts of equity in outsiders' hands creates a 'contestable' structure, in which the incumbent is subject to a large take-over threat. Therefore, the incumbent may wish to retain a certain amount of equity to reduce the take-over threat. Throughout most of his analysis, Bebchuk (1999) considers a simple majority rule, together with one-share one-vote. The

implication is that, if the incumbent wishes to create a block on control, he retains 50% of the equity.

In the framing of this model, the existing theoretical literature on the differences between financial and ownership structure is developed. I am particularly interested in the effects of a society's legal systems and financial development on the differences between cash-flow rights and control rights. This analysis is motivated by the work of Castañeda Ramos that demonstrates that Mexican corporate structures are characterised by a high inside control structure with a much lower equity structure. These companies achieve this through dual classes of shares, majority rules, and pyramids. Further, it is argued in general that developing countries appear to have this structure, while cash-flow rights and control rights are much more aligned in developed countries.

I develop a game-theoretic model with the aim of examining the conditions under which there is separation of ownership and control. In particular, I consider four main factors, as follows: a) the degree of managerial risk-aversion, b) the level of private benefits of control, c) the alignment of the 'social planner's' interests with the incumbent management or the investors, and d) the efficiency or inefficiency of the financial market (or rationality/irrationality of investors).

This model is closest in spirit to Bebchuk's (1999) analysis. However, I provide the following developments. First, in Bebchuk's model, the risk-averse incumbent wishes to sell of his equity, but may have an incentive to maintain the minimum equity stake in order to block control. In contrast, although I also consider a risk-averse incumbent, he may wish to increase his equity stake to commit to the investors that he will exert high effort. I demonstrate that this depends on his degree of risk-aversion. Second, Bebchuk only considers a simple 50/50 voting rule, and, for most of his paper, he focuses on a single-class of shares. Although he discusses the possible effects of dual voting stock, he does not analyse this. A major contribution of this researcher model is that I consider the effects of the voting rule and the duality of stock (in terms of voting and non-voting equity) explicitly.

The rest of the chapter is organised as follows. In the next section, I present the model. In section 3, I provide a numerical example. In section 4, I present evidence from Mexico that supports this analysis. Section 5 provides the conclusions and some final remarks.

3.2 The Model

I consider a game with the following players: a risk-averse incumbent manager who initially runs a firm and wishes to take his firm public in an IPO, a rival manager who launches a hostile take-over bid, a social planner, and a large number of atomistic, price-taking outside investors. Corporate governance relating to the corporation is affected in two ways in this model. First, the corporate charter specifies an exogenously given majority rule required for outside equity holders to win in a voting contest against the incumbent. Second, the social planner allows the incumbent to issue a certain proportion of outside equity as the non-voting variety.

The incumbent initially owns all of the equity[132]. At IPO, he decides how much of the equity to retain, and how much voting and non-voting equity to issue to outsiders. Subsequently, a rival appears who instigates a hostile take-over battle. The incumbent is interested in the firm due to both the cash flow rights and the private benefits of control.

The timeline of the game is as follows:

***Date 0*:**

The policy-maker sets a proportion $\theta \in [0,1]$ that the incumbent is allowed to issue as non-voting equity to outside equity-holders (the balance must be issued as voting equity). The corporate charter contains an exogenously given majority rule, specifying the proportion of votes[133] $\phi \in [0,1]$ that a rival would require in order to capture the

[132] For simplicity, I assume that there is no debt; that is, the firm is all-equity. Hence, I abstract from capital structure decisions.

[133] I initially take the exogenously given majority rule as a general, unspecified proportion between zero and unity, with the social planner choosing the proportion of non-voting equity allowed. In section 2.1

firm. I assume that the voting equity held by the incumbent and the outside equity-holders have the same votes per share (the *single-class* assumption).

***Date 1*:**

The incumbent decides how much of the equity $1-\alpha$ to issue at IPO, and how much α to retain.

***Date 2*:**

The incumbent exerts effort in running the business. The effort level affects the probability of success as follows; $p = \frac{1}{2} + \gamma e \in [0,1]$. In the case of success, the project achieves income $R > 0$. In the case of failure, the project achieves an income of zero.

***Date 3*:**

A rival appears and launches a hostile take-over battle. This consists of a voting contest where the incumbent votes against the outside equity-holders regarding the take-over. If the rival wins the take-over battle, he will subsequently generate an expected cash-flow $R_r > R$. Therefore, if the structure is such that the rival can win the vote, he will win, and the incumbent will be ousted, regardless of the success or failure of the incumbent's project.

***Date 4*:**

Payoffs occur, and the manager who is in charge at date 3 receives private benefits of control equal to B.

3.2.1 Contestable versus Non-Contestable Structure

The social planner's choice of non-voting equity $\theta \in [0,1]$, the exogenously given majority rule $\phi \in [0,1]$, and the incumbent's choice of equity to retain α and issue $1-\alpha$, combine to determine the contestability of the structure. Following Bebchuk (1999), I define a non-contestable structure (NCS) as one where the incumbent cannot

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and in the numerical section, I discuss why I have analysed it in this way. Furthermore, in the numerical section, I 'pin down' the majority rule at 50%.

be ousted by the rival. I define a contestable structure (CS) as one where the incumbent can be ousted by the rival.

The incumbent votes for himself. Outsiders vote for the rival regardless of whether the project succeeds or fails (since $R_r > R$). Given $\theta \in [0,1]$, and $\phi \in [0,1]$, I define a critical value $\alpha' \in [0,1]$ such that the following holds;

Lemma 1:
If $\alpha \in [0, \alpha']$, *the structure is contestable (CS). If* $\alpha \in [\alpha', 1]$, *the structure is non-contestable (NCS).*

Lemma 1 states that, given the majority rule and the non-voting equity allowance, if the incumbent holds a low level of equity (and hence issues a high level to outsiders), he faces a contestable structure (and therefore will be ousted). If he holds sufficiently high equity, the structure is non-contestable, and he cannot be voted out. I analyse α' in more detail later.

At this point, it is worth analysing why I have chosen to model the majority rule as exogenously given, with the social planner choosing the non-voting equity allowance. Further, I will discuss the social planner's incentives.

The main idea here is that the majority rule may be clear, transparent and highly visible to investors. On the other hand, other aspects of corporate control structures, such as duality of voting stock, non-voting equity, pyramids, and cross-holdings, are much more complex and opaque.

Furthermore, most corporate control structures around the world use either a simple majority rule ($\phi = 0.5$; that is, the investors require more than 50% of the votes to capture the firm) or a super-majority rule ($\phi = 0.75$; that is, the investors require more than 75% of the votes to capture the firm). I argue that this suggests that there may be some focal point, or societal norm, associated with the choice of the highly-visible majority rule. In particular, the simple majority rule ($\phi = 0.5$) may be viewed by society as a *fair* rule.

In this model, I consider the incentives of the planner when deciding on the corporate control structure. I assume that she[134] balances the wealth of the incumbent and the outside investors when making her decision. In particular, I consider a case where she may favour the incumbent over the investors, such that she would like to set an NCS structure to enable the incumbent to retain control.

In modelling the social planner's choices, I assume that the observable majority rule is set by societal norms (throughout the formal model, I consider a general majority rule $\phi \in [0,1]$, but in the numerical example, I assume that the societal norm has set the majority rule at $\phi = 0.5.$). On the other hand, she has leeway over the choice of the more opaque non-voting equity, due to investor irrationality.

3.2.2 Solution of the Game

I now proceed to solve the game by backward induction. First, I take as given the contestability of the corporate structure (NCS or CS; as described in lemma 1), which is determined by the exogenously given majority rule, the non-voting equity allowance chosen by the social planner at date 0, and the incumbent's date 1 equity choice, and I solve for the incumbent's optimal date 2 effort level. Then I move back to solve for the incumbent's optimal date 1 equity issuance, given the contestability of the structure. Finally, I solve for the social planner's choice of the non-voting equity allowance.

3.2.2.1 The Incumbent's Date 2 Effort Stage

First, I take as given that $\alpha \geq \alpha'$; that is, the risk-averse incumbent has issued equity such that the structure is NCS, given the majority rule and non-voting equity allowance. Under the NCS structure, the incumbent's expected payoff is:

$$\prod_{M1} = \alpha PR - \beta e^2 - \mu Var(X) + B + (1-\alpha)\bar{V}, \qquad (1)$$

[134] I refer to the social planner using the female gender throughout the Chapter.

where the first term is the incumbent's equity stake in the expected firm value, the second term is his cost of effort, the third term represents his risk-aversion, the fourth term is his private benefits, and the last term is the cash received from outside equity holders for their stake in the firm, given that they expect the firm to be worth $\overline{V}$. In an efficient market, investors pay a fair price, and $\overline{V} = PR$.

Since the date 3 outcome has a binomial distribution, $Var(X) = \alpha^2 R^2 P(1-P)$. Therefore, substituting for P and $Var(X)$, the incumbent's payoff becomes:

$$\prod_{M1} = \alpha R\left(\tfrac{1}{2} + \gamma e\right) - \beta e^2 + \mu\alpha^2 R^2\left(-\tfrac{1}{4} + \gamma^2 e^2\right) + B + (1-\alpha)\overline{V}. \tag{2}$$

Solving $\frac{\partial \prod_{M1}}{\partial e} = 0$, I obtain the incumbent's optimal effort level, given his equity stake:

$$e^* = \frac{\alpha\gamma R}{2\beta - 2\mu\alpha^2\gamma^2 R^2}. \tag{3}$$

For example, if $\mu = 0$, the incumbent is risk-neutral, and I have the standard optimal effort level under risk-neutrality[135] $e^* = \alpha\gamma R / 2\beta$.

Next, take as given that $\alpha < \alpha'$; that is, the incumbent has issued equity such that the structure is contestable. Since the incumbent is voted out for sure, it is optimal for him to exert zero effort.

3.2.2.2 The Incumbent's Date 1 Equity Issue Stage

Consider the NCS structure ($\alpha \geq \alpha'$). Having solved for the incumbent's optimal date 2 effort level for given equity stake, I now move back to date 1 to solve for the incumbent's optimal equity retention and issuance. I substitute the optimal effort level

[135] See, for example, Fairchild (2004, 2006).

(3) into equation (2). Noting that, in an efficient market with competitive rational investors, the investors pay a fair price for their investment (i.e. they invest at zero NPV), I obtain the incumbent's expected indirect payoff under the NCS:

$$\hat{\Pi}_{M1} = \frac{R}{2}\left(1 - \frac{\mu\alpha^2 R}{2}\right) + B + (1 - \frac{1}{2}\alpha)\frac{(\alpha\gamma^2 R^2)}{2\beta - 2\mu\alpha^2\gamma^2 R^2)}. \quad (4)$$

Note that, when $\mu = 0,$ the incumbent is risk-neutral, and the first-term of (4) equals the standard result, under risk-neutrality, that $\hat{\Pi}_{M1} = \frac{\alpha^2\gamma^2 R^2}{4\beta}$. Hence, when $\mu = 0,$ $\frac{\partial \hat{\Pi}_{M1}}{\partial \alpha} > 0, \ \forall \alpha.$ Therefore, when $\mu = 0,$ the incumbent maximises his payoff by selecting $\alpha^* = 1.$ The intuition is as follows. The incumbent issues equity, and then exerts effort. Hence, there is a *moral hazard* problem, due to the incumbent's incentives to shirk (i.e. exert low effort). Further, since the outside investors pay a fair price, the incumbent suffers from his own moral hazard, since, if the investors expect shirking, they will not pay very much for the equity. This is termed *the incumbent's commitment problem*. He would like to commit to exert a high effort, since then investors would pay more for their equity. However, he cannot commit to this, since he issues equity first, and *then* exerts effort.

The incumbent's retention of equity forms a type of commitment device to exert high effort, and therefore the outside holders pay more for their equity. When the incumbent is risk-neutral, the commitment problem implies that the incumbent's payoff is unambiguously increasing in his equity stake, and therefore, he maximises his payoff by holding all of the equity: $\alpha^* = 1.$

Therefore, under the NCS, the commitment problem drives the incumbent to increase his equity stake. However, as identified by Bebchuk (1999), risk-aversion drives the incumbent to reduce his equity stake, and issue more outside equity (Bebchuk does not consider the commitment problem). Therefore, when considering the incumbent's equity decision, I may analyse a trade-off between managerial commitment and risk-aversion. I consider this in lemma 2.

Examination of equation (4) enables us to define two critical values of the risk-aversion parameter, μ', and $\mu'' > \mu'$, such that the following holds:

Lemma 2: *Under the NCS structure, the incumbent's payoff (4) has the following properties;*

a) *Low Risk Aversion: When* $\mu \in [0, \mu']$, $\frac{\partial \hat{\Pi}_{M1}}{\partial \alpha} > 0, \ \forall \alpha \in [0,1]$. *That is, the incumbent's payoff is increasing in his equity stake. Therefore, the incumbent optimally chooses* $\alpha^* = 1$.

b) *Medium Risk Aversion: When* $\mu \in [\mu', \mu'']$, $\frac{\partial \hat{\Pi}_{M1}}{\partial \alpha} > 0, \forall \alpha \in [0, \hat{\alpha} < 1]$, *while* $\frac{\partial \hat{\Pi}_{M1}}{\partial \alpha} < 0, \ \forall \alpha \in [\hat{\alpha} < 1,1]$. *That is, the incumbent's payoff is an inverted-U shape, increasing in his equity stake initially, reaching a maximum at* $\hat{\alpha}$, *and then decreasing.*

c) *High Risk Aversion: When* $\mu > \mu''$, $\frac{\partial \hat{\Pi}_{M1}}{\partial \alpha} < 0, \ \forall \alpha \in [0,1]$. *That is, the incumbent's payoff is decreasing in his equity stake. If the incumbent prefers the NCS structure, he will optimally choose* $\alpha^* = \alpha'$. *If the incumbent prefers the CS structure, he will choose* $\alpha^* = 0$.

Lemma 2a) states that the incumbent's payoff under the NCS structure is unambiguously increasing in the incumbent's equity stake, for all equity levels between 0% and 100%, for low levels of risk aversion (including risk neutrality). This is because the commitment effect dominates; the higher the incumbent's equity stake, the more effort that he commits to exert, and the higher the share price that outside shareholders are prepared to pay. This drives the incumbent to maximise his equity stake. In *lemma 2b)*, there is a trade-off between the commitment effect and risk-aversion. In *lemma 2c)*, high risk aversion dominates, and the incumbent's payoff under the NCS structure is unambiguously decreasing in the incumbent's equity stake.

I will be analysing the incumbent's incentives to choose a CS or NCS structure. I note that, when $\mu \in [0, \mu']$, the solution is trivial. Since the incumbent is mildly risk-averse, the commitment effect dominates, and the incumbent optimally chooses $\alpha^* = 1$. Therefore, the structure is NCS. When $\mu \in [\mu', \mu'']$, (i.e. medium risk aversion) the analysis of the model is very complex. From this point on, I focus on the case of high risk-aversion, that is, I assume;

A.1: $\mu > \mu''$.

At this point, is worth recalling that I am particularly interested in analysing why corporate structures in some capital markets are characterised by a separation of cash-flow rights and control rights, while in other regimes, cash-flow rights and control rights are much more aligned. *Lemma 1* reveals that one ingredient may be the degree of risk-aversion. In low-risk markets, the incumbent may be prepared to hold more equity (and therefore control rights and cash-flow rights may be closely aligned), while in highly volatile markets, the incumbent may wish to minimise his equity stake, while remaining in control (inducing a separation of control rights and cash-flow rights). Hence, this may be the case why emerging markets are characterised by this separation.

By focussing on extreme risk aversion, this analysis is similar to Bebchuk's (1999) model. That is, because risk-aversion dominates, the incumbent wishes to minimise his equity stake. If he prefers the CS structure, he will set $\alpha^* = 0$. If he prefers the NCS structure, he will minimise his equity stake to $\alpha^* = \alpha'$, such that he has just enough voting equity for the structure to be non-contestable, as defined in lemma 1. I proceed to analyse his choice between NCS and CS.

Next, take as given that the incumbent has set the CS structure ($\alpha < \alpha'$). Hence, he is voted out for sure. Therefore, I have already established that his optimal date 1 effort level is zero effort. Therefore, the incumbent's date 0 expected payoff is:

$$\prod_{M1} = \alpha R_r + (1-\alpha)\overline{V} - \alpha\mu Var(X). \qquad (5)$$

I assume that, if the incumbent is voted out, he retains any equity that he has. Therefore, since he exerts zero effort, and since his equity stake is risky, his optimal equity stake, under the CS structure will be $\alpha^* = 0$. Given that risk-neutral outside equity-holders pay a fair price for their equity, I may state the following.

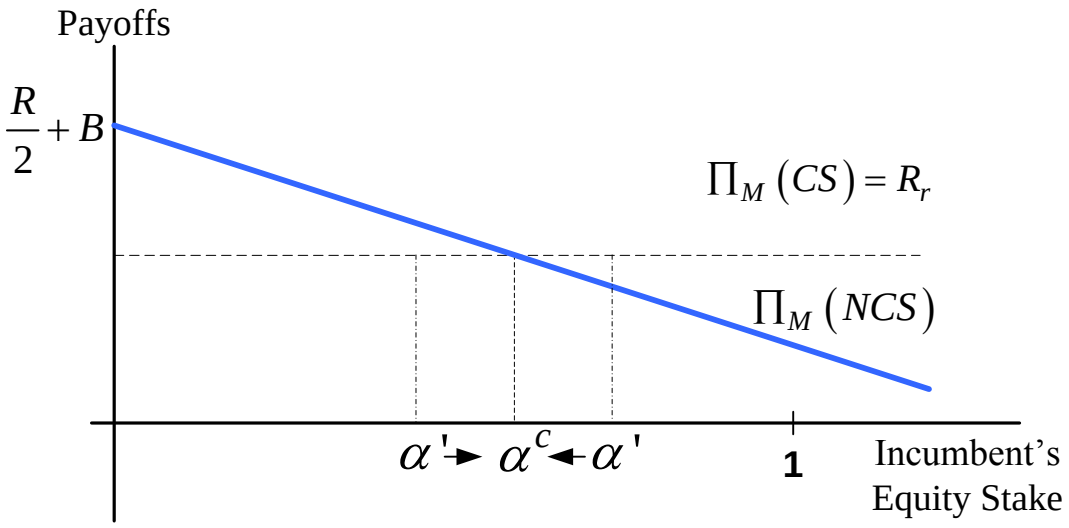
Lemma 3:

Under the CS structure $(\alpha < \alpha')$*, the incumbent's optimal equity stake is* $\alpha^* = 0$. *Since risk-neutral outside equity-holders pay a fair price for their equity, the incumbent's payoff under the CS structure becomes*

$$\Pi_{M1} = R_r. \tag{6}$$

Given the majority rule and the non-voting equity allowance (which determines α'), the incumbent's date 1 equity choice determines whether the structure is contestable $(\alpha < \alpha')$ or non-contestable $(\alpha \geq \alpha')$. In order to decide between the CS and NCS structure, the incumbent compares (4) and (6). Figure 3.1 below presents a comparison of the incumbent's payoffs under the NCS and CS structures.

Figure 3.1 Graphical analysis of Proposition 1



Note to Figure 3.1: Due to high risk aversion, the incumbent's payoff under the NCS structure is downward-sloping. Therefore, under NCS, the incumbent would like to minimise his equity stake. If the incumbent holds less than α', the structure is CS, in which case the incumbent prefers to sell all of his equity, $\alpha^* = 0$. If the incumbent holds more than α', the structure is NCS. The exogenously given majority rule, plus the social planner's choice of the non-voting equity allowance, determines α'. Assume that the planner prefers the NCS structure. If $\alpha' > \alpha^C$, then the incumbent will not choose the NCS structure (that is, by holding equity at least equal to α'), since his payoff under the NCS structure is lower than under the CS structure. The incumbent will prefer to sell all of his equity. If $\alpha' < \alpha^C$, the incumbent maximises his payoff by minimising his equity stake such that the structure remains NCS, that is, he optimally chooses $\alpha^* = \alpha'$.

Under the assumptions that the social planner a) prefers the NCS structure, and b) aims to maximise the firm value under the NCS structure (which implies that she wishes to force the incumbent to maximise his equity stake under the NCS structure), the planner optimally chooses the non-voting equity such that $\alpha' = \alpha^C$.

In the numerical example provided, $\alpha' = \alpha^C = 0.3$. With a majority rule of 50%, the social planner optimally allows the incumbent to issue 57% of outside equity as non-voting equity. The incumbent then optimally retains 30% of the equity, and issues 70% to outsiders. The incumbent and the outsiders then have equal votes, and the incumbent wins the voting contest.

The above diagram reveals that the incumbent's private benefits from running the company have a crucial effect on the incumbent's optimal choice control structure, and his optimal equity stake, as follows.

The incumbent's payoff under the CS structure is horizontal at R_r. Since I am focussing on the case where risk-aversion dominates $(\mu > \mu'')$, the incumbent's NCS payoff is downward sloping. Further, examination of equation (4) reveals that, when $\alpha = 0,\ \prod_{M1}(NCS; \alpha = 0) = \frac{R}{2} + B.$ Therefore, I may state the following;

Proposition 1: *The Effect of Private Benefits on the Incumbent's Equity Issuance Choice:*

a) If $\frac{R}{2} + B < R_r,\quad \prod_{M1}(NCS) < \prod_{M1}(CS)\ \ \forall \alpha \in [0,1]$. *(that is, the payoff under the NCS structure starts below the payoff under the CS structure, and, since it is downward sloping, remains below for the entire equity interval). Therefore, the incumbent chooses* $\alpha^* = 0,$ *and the structure is contestable (CS).*

b) If $\frac{R}{2} + B \geq R_r,\quad \prod_{M1}(NCS) > \prod_{M1}(CS)$ *when* $\alpha = 0.$ *Since* $\mu > \mu''$, *and therefore* $\frac{\partial \hat{\prod}_{M1}(NCS)}{\partial \alpha} < 0,$ *there exists a critical equity stake,* $\alpha^C > 0,$ *where* $\prod_{M1}(NCS) = \prod_{M1}(CS).$ *Hence, when* $\alpha \in [0, \alpha^C),\ \prod_{M1}(NCS) > \prod_{M1}(CS)$, *and when* $\alpha \geq \alpha^C,\ \prod_{M1}(NCS) \leq \prod_{M1}(CS).$ *(that is, the lines cross at* α^C*). Therefore,*

i.) If $\alpha^C > \alpha'$, *the incumbent optimally chooses* $\alpha^* = \alpha'$, *and the structure is NCS.*

ii.) If $\alpha' > \alpha^C$, *the incumbent optimally chooses* $\alpha^* = 0,$ *and the structure is CS.*

Note that the incumbent's incentives are driven by his private benefits. When private benefits are small $(\frac{R}{2} + B < R_r)$, he prefers to set the CS structure. When private benefits are large $(\frac{R}{2} + B \geq R_r),$ he prefers to set the NCS structure. Further, from the figure 3.1 I observe that, as private benefits increase, such that $\prod_{M1}(NCS)$ shifts upwards, α^C shifts to the right.

I have already noted that high risk-aversion may be one factor that drives a separation of cash-flow rights and control rights. Proposition 1 highlights a second factor: high private benefits.

3.2.2.3 Social Planner's Date 0 Choice of Governance Rules

Finally, I move back to date 0 to determine the social planner's optimal choice of non-voting equity $\theta \in [0,1]$. Given the majority rule[136] $\phi \in [0,1]$, the social planner's choice determines α'.

Thus far, I have identified two factors that drive the separation of cash-flow rights and control rights: a) the incumbent's high risk-aversion, and b) high private benefits of control. In this section, I add the two final ingredients: c) alignment of social planner's and incumbent's incentives, and d) investor irrationality.

I need to specify the social planner's objectives. First, I consider whether she is aligned with investors (she focuses on maximisation of firm value) or the incumbent (she focuses on the incumbent's wealth).

Second, I consider the effect of investor rationality/irrationality on the social planner's choice of non-voting equity $\theta \in [0,1]$. I consider two cases. In the first case, investors are fully rational, in that they understand the effects of the majority rule and the non-voting equity. In the second case, they exhibit a level of irrationality. They can observe the majority rule, but they do not understand the effect of non-voting equity.

I focus on the case where $\frac{R}{2} + B \geq R_r$. Therefore, proposition 1b) applies. Therefore, the social planner's choice of $\theta \in [0,1]$ determines whether the structure is NCS or CS, and therefore affects the incumbent's optimal choice of equity.

[136] In the numerical example, I fix the majority rule at $\phi = 0.5$.

Denote the total number of shares in the company as N, the number of shares held by the incumbent manager as N_M, and the number of shares held by the outsiders as N_E. Therefore, the total number of shares are $N = N_M + N_E$. Hence, the cash-flow rights are given by $\alpha = \frac{N_M}{N}$, and $1-\alpha = \frac{N_E}{N}$.

Denote the total number of votes as v. Hence, $v = N_M + N_E(1-\theta)$. The outsiders win the vote if

$$N_E(1-\theta) \geq \phi[N_M + N_E(1-\theta)]. \tag{7}$$

Since $\alpha = \frac{N_M}{N}$, and $1-\alpha = \frac{N_E}{N}$, this may be re-written as

$$(1-\alpha)(1-\theta) \geq \phi[\alpha + (1-\alpha)(1-\theta)]. \tag{8}$$

Lemma 1 defined a critical level of managerial equity α' such that the structure switches from CS to NCS. Hence, α' is such that (8) becomes an equality. That is,

$$(1-\alpha')(1-\theta) = \phi[\alpha' + (1-\alpha')(1-\theta)]. \tag{9}$$

Hence, the social planner's choice of θ affects α'. *Proposition 1* (and Figure 3.1) reveals that, if $\alpha_C > \alpha'$, the incumbent chooses $\alpha^* = \alpha'$, and the structure is NCS. If $\alpha_C < \alpha'$, the incumbent chooses $\alpha^* = 0$, and the structure is CS.

3.2.2.3.1 Investors are fully rational.

In order to consider the social planner's optimal choice of θ, I define the social planner's payoffs under the NCS and CS structures respectively;

$$\prod_{SP}(NCS) = \gamma V(\alpha) + (1-\gamma)Y, \tag{10}$$

$$\prod_{SP}(CS) = \gamma R_r. \tag{11}$$

Hence, I have defined the social planner's payoff as a weighted average of the value of the firm and the incumbent's private benefits under the NCS and CS systems. A justification for this formulation is that the social planner may be 'under pressure' from investors and from the incumbent. For high γ, the social planner favours the investors, while for low γ, the social planner favours the incumbent.

The social planner prefers the NCS structure if (10) > (11); that is if the weight γ that she places on firm value is less than a critical value γ_C, where

$$\gamma_C = \frac{Y}{V(\alpha) - Y - R_r}. \tag{12}$$

Given that she prefers NCS, I state two objectives for the social planner as follows. She wishes to a) minimise the non-voting equity θ such that the structure remains NCS, and b) maximize firm value given the NCS.

I justify these assumptions as follows. Firstly, I assume that the pressure placed on the social planner by outside investors is increasing in the non-voting equity, driving her to minimise the level of this parameter. Secondly, the pressure placed by outside investors is reducing in the value of the firm under the NCS, driving her to maximise firm value under the NCS.

If the social planner prefers the NCS structure, she will choose θ such that (9) is an equality (this minimises the non-voting equity θ required to provide an NCS structure, provided that the incumbent has chosen $\alpha = \alpha'$). Further, I set $\alpha' = \alpha_C$ in (9). This ensures that the incumbent optimally chooses $\alpha^* = \alpha_C$, therefore ensuring that the structure is NCS while maximising the firm value under NCS.

Therefore, setting $\alpha' = \alpha_C$ in (9), and solving for θ^*, I obtain

$$\theta^* = \max\left\{\frac{1-\alpha_C-\phi}{(1-\alpha_C)(1-\phi)}, 0\right\}. \tag{13}$$

Note that $\frac{\partial \theta^*}{\partial \alpha_C} < 0$. Since $\frac{\partial \alpha_C}{\partial B} > 0$, then $\frac{\partial \theta^*}{\partial B} < 0$.

That is, as the incumbent's private benefits increase (shifting the NCS payoff in diagram 1 upwards), α_C shifts to the right, and the non-voting equity θ required is reduced. The intuition is that, as the incumbent's private benefits increase, he is prepared to hold more equity in order to retain control (in spite of his risk-aversion). Therefore, the social planner does not need to provide so much protection in the form of non-voting equity.

3.2.2.3.2 Investors are irrational (that is, investors understand ϕ, but do not understand non-voting equity).

As a final ingredient in the separation of control rights and cash-flow rights, I consider investor irrationality[137]. In this model, irrational investors do not understand the effects of non-voting equity (or do not realise that non-voting equity can be issued by the incumbent) Therefore, they view that $\theta = 0$ in equation (9). Therefore, they view the critical equity level at which the structure switches from CS to NCS as α'', satisfying $(1-\alpha'') = \phi$. However, since $\theta^* > 0$ (from equation 13), the true critical value is $\alpha' < \alpha''$. Therefore, if the social planner chooses $\theta^* > 0$ according to (13), the incumbent chooses $\alpha^* = \alpha' = \alpha_C < \alpha''$. Therefore, the structure is NCS, but the outside investors believe it to be CS. Therefore, the social planner's payoffs under NCS and CS are:

$$\prod_{SP}(NCS) = \gamma R_r + (1-\gamma)Y. \tag{14}$$

$$\prod_{SP}(CS) = \gamma R_r. \tag{15}$$

[137] In order to focus my analysis, the investor irrationality is purely in terms of the date 0 control structure. The 'pressure' that they exert on the social planner (in relation to equations 14 and 15) occurs at date 0, when the planner establishes the structure. At date 1, the investors become rational, understand the structure (NCS or CSD) and pay a fair price for their shares.

Therefore, the social planner always chooses $\theta^* > 0$ according to (13). That is, due to investor irrationality, the social planner is not afraid to provide a defence mechanism (non-voting equity) for the incumbent.

This model has identified several factors that might induce a separation of cash-flow and control rights, as follows;

a) *High risk aversion/ high volatility*. This induces the manager to reduce his equity stake. Since he wishes to retain control, he wishes to use devices such as non-voting equity (modelled here), and dual class of shares, pyramids, cross-holdings (not modelled here).

b) *High private benefits.* In societies where the legal system enables managers to take high private benefits from the firm, one may observe separation of ownership and control. This may tie in with weak investor protection.

c) *Social planner sympathetic towards incumbents*. In such systems, the social planner may facilitate devices to allow the separation of ownership and control (such as non-voting equity). Again, this may tie in with weak investor protection.

d) *Irrational investors*. If investors do not understand the separation of ownership and control, it becomes easier for the social planner to facilitate it.

I may argue that a) – d) reflect the features of emerging, civil law countries, such as Mexico. I now turn to the evidence that demonstrates that Mexico is characterised by separation of ownership and control, and that a) – d) are indeed a feature of Mexican markets.

3.3 Numerical Example

In order to clarify the factors, identified by this model, that drive the separation of cash flow and control rights, I now present a numerical example. Examination of the figure 3.1 *Graphical analysis of Proposition 1* will facilitate this analysis.

Let us assume that, due to societal norms of fairness, the majority rule is $\theta = 0.5$. I introduce the four factors, one by one. First, the incumbent is *highly risk averse*. Therefore, his NCS payoff is downward sloping, as in Figure 3.1. Hence, he wishes to minimise his equity stake.

Second, he has *high private benefits of control*, such that $\frac{R}{2} + B > R_r$. Therefore the NCS and CS payoffs cross at α_C. Let these payoffs be such that $\alpha_C = 0.3$.

Third, the social planner's weights in equations (10) and (11) are such that she prefers the NCS, even when investors are fully rational. That is, *the planner favours the incumbent over the investors*. From equation (13), her optimal choice of the non-voting equity proportion allowed is $\theta^* = 0.57$.

Therefore, the incumbent's optimal equity stake is $\alpha^* = \alpha_C = 0.3$. He issues outside equity of $1 - \alpha^* = 0.7$. The non-voting equity is $\theta^*(0.7) = 0.4$. The voting equity is $(1 - \theta^*)(0.7) = 0.3$. Hence, the incumbent's proportion of votes equals the outside equity holders' proportion of votes, and the structure is NCS.

Finally, I introduce *irrational investors.* They observe the majority rule $\theta = 0.5$. However, they do not understand the non-voting equity allowance. Since the incumbent holds $\alpha_C = 0.3$, they believe that the structure is CS. Hence, the social planner can choose the non-voting equity proportion $\theta^* = 0.57$ in order to generate an NCS structure, without fear of investor pressure (comparing equations 14 and 15).

3.4 Evidence from Mexico

3.4.1 Corporate Legislation in Mexico

To understand the practices of corporate governance of any nation it is necessary to be aware of its underlying legal and enforcement framework, as well as any discretionary document or guideline issued for that purpose, such as codes of best practice. In the case of Mexico, the Mercantile Companies Law (LGSM)[138] and the Stock Market Law (LMV)[139] address most of the legal framework in this regard. In addition, there is a Code of Best Corporate Practices (CMPC)[140] issued by the Board of Mexican Leading Entrepreneurs and memorandums issued by the National Banking and Securities Commission (CNBV)[141], which also deal with important aspects of the corporate governance of Mexican companies.

The LGSM has the highest hierarchy to rule trading companies; thus this law is the most general law governing all types of trading companies. In general, this law copes with the incorporation, operation, dissolution and liquidation of companies; *the establishment of the property rights of investors;* the management and the surveillance organs; and the disclosure of the financial information. The LMV governs publicly traded companies (PTC) in Mexico, in terms of obligations and legal requirements needed to be fulfilled to register, update, suspend and cancel any issuance of stock in Mexican stock markets. The LMV aims to encourage an *efficient, fair and clear* Mexican stock market, which consolidates the current regime applicable to PTCs to improve their corporate governance practices. This law also aims to promote the access of medium-sized companies to Mexican stock markets. The CMPC provides some guidance to enhance corporate governance practices. The objectives of this code are to attain transparent management practices by improving the function of the Board of Directors and making corporate information more useful, prompt and reliable. It is worth mentioning that compliance with this code is voluntary, although PTCs must declare their degree of adherence to these practices.

[138] By its Spanish acronym.
[139] By its Spanish acronym.
[140] By its Spanish acronym.
[141] By its Spanish acronym.

Core principles of the LGSM establish that shares are freely transferable; *grant equal cash flow and voting rights*; *and state that each share entitles its holder to one vote*. Nevertheless, this law also mentions that it is possible for companies to specify in their corporate charter different classes of shares with particular rights per class, such as *"shares of limited voting rights"*[142] or *"privileged shares"*[143] (Mexico 2006, Arts.112-113). Further, shareholders possessing shares of *"limited rights"* have the same rights as the minority shareholders to oppose to the agreements of the Assembly of Shareholders and to verify the financial statements and all the books of the company (Mexico 2006, art.113). It is of note that the LMV, as a further provision complementing the LGSM, states for *Public Trading Companies*[144] **(PTCs)** that they can only issue common shares. *However, this law points out that the CNBV, at its own discretion, can allow the issuance of non-common shares as long as the Commission considers that these shares do not exceed 25 percent of the total capital that is publicly held at the time of the public offer*. Further, the CNVB could increase this percentage when the shares issued are part of a scheme of convertible shares that will become common shares in a period of 5 years at most. Finally, it also established that shares with no voting rights will not account for the quorum required to hold a shareholders' meeting, whereas shares with limited or restricted voting rights account only for the meetings in which their holders are allowed to participate (Mexico 2005, Art.54).

The LGSM recognises the Assembly of Shareholders (ASH) as the highest corporate governance organ of any company (Mexico 2006, Art.178). This Assembly has the authority to approve and ratify all the acts and operations of the company in its meetings[145], which can be ordinary or extraordinary. Ordinary shareholders' meetings might be held at least once per year within the four months following the ending of each fiscal year. In general, these meetings will deal with issues regarding the operation of the company, i.e. its management, surveillance and financial results

[142] Shares of *"limited voting rights"* are not allowed to vote in ordinary shareholders' meetings, rather they can be voted in the extraordinary shareholders' meetings that discuss the particular matters specified in the corporate provisions.
[143] These shares are usually *limited voting shares* with preferred dividends.
[144] A traded company is considered to be public when trades its shares in Mexican stock markets (Mexico 2005). PTCs in Mexico are primarily governed by the LMV; nevertheless, when the LMV issues no provisions in a specific regard, the LGSM has to be obeyed (Mexico 2005, Art.22).
[145] The LGSM also permits corporate charters to specify that when shareholders agree on any resolution with the totality of the votes, it would not be necessary to hold any meeting as long as the resolution is ratified in writing (Mexico 2006, Art. 178).

(Mexico 2006, Art.181). Alternatively, extraordinary shareholders' meetings can be held at any time of the year[146] and will tackle issues affecting *the corporate structure*. Some examples of these issues are: increasing or reducing the capital of the company; *merger or take-over*; issuing preferred shares; and amending their bylaws among others (Mexico 2006, Art.182). To be legally allowed to hold an ordinary meeting, at least half of the total capital needs to be present at the meeting. To validate a resolution, the agreement of the majority of votes present in that meeting is necessary. Extraordinary meetings require the presence of three quarters of the total capital[147] and their resolutions are validated with the agreement of the majority of the total capital (Mexico 2006, Arts.189-190). In other words, Mexican law establishes that to deliberate take-over issues, 75 percent of the shareholders need to be present, and at least 50 percent of the voting capital needs to agree any resolution to be valid (that is a majority rule).

Furthermore, for **PTCs** the LMV allows entering into shareholders agreements issues dealing with: non-compete provisions, option rights, sale and transfer of shares, exercise of pre-emptive rights and pooling vote provisions. Finally, this law permits **PTCs** to include *take-over defence provisions* as long as they are approved in an extraordinary shareholders' meeting with at least 95 percent of the votes; they do not exclude any shareholders from their economic benefits; and the possibility of take-over is not completely eliminated (Mexico 2005, Art.48).

The LGSM states that management of Mexican companies is *'... the responsibility of one or more temporary and revocable directors who may or may not be executives of the company'* (Mexico 2006, Art.142). When two or more directors are appointed, a Board of Directors (BOD) will be constituted. To have the right to appoint a director to the Board, this law requires shareholders to possess at least 25 percent of the total capital. However, this percentage is reduced to ten percent for **PTCs** (Mexico 2006, Art.144). Further, the CMPC suggests that shareholders owning at least two percent of

[146] Either the BOD or the statutory auditors can call for a shareholders meeting. Shareholders with 33 percent of the total capital or more are allowed to ask the BOD or statutory auditors for a shareholders' meeting.

[147] However, it is possible for companies to establish a higher quorum to hold an extraordinary meeting. This will be specified in their corporate charter.

the total capital could be members of the BOD (Consejo Cordinador Empresarial (CCE) 1996). According to the CMPC, the BOD should be composed of five to fifteen proprietary directors, it being desirable not to have any substitute members[148]. Three different classes of directors should constitute the Board: outside directors, owning directors and related directors. Outside directors are those selected by their professional prestige, experience and capacity. Owning directors can be either any significant[149] shareholder or the individuals that direct those significant shareholders. Related directors are those that do not fall into any of the two previous categories (CCE 1999). It is advised that outside and owning directors would represent altogether at least 40 percent of the total members of the Board. At the same time, outside directors should be at least 20 percent of the total board members. To reach any resolution, the LGSM requires that the BOD celebrates a Session[150] and deliberates over the resolution. A resolution will be valid when the majority of the attending members favour it. However, this law also allows the Board to validate any resolution reached with a no Session when the agreement was unanimous and the resolution ratified in writing (Mexico 2006, Art.143).

As an amendment of the LGSM, the LMV states that the management of **PTCs** and their controlling companies, when this is the case, is the duty of both the BOD and the CEO (Mexico 2005, Art.23). According to the LMV, BODs of **PTCs** must be composed of not less than five and not more than 21 proprietary directors, at least 25 percent of them being outsider directors. It is allowable to designate a substitute director for each proprietary member[151]. When a PTC is part of a business network or a consortium, no external auditor[152] of any of these companies can be appointed to be a member of the Board if he/she had performed that auditing role within the 12 months previous to such appointment (Mexico 2005, Art.24). In other words, only recently

[148] In the case that substitute members were elected, they would be proposed by the proprietary member to whom he/she would only substitute (CCE 1999).
[149] By significant shareholders is meant those investors that posses two percent or more of the total capital of the company (CCE 1999).
[150] To be able to celebrate a *Session*, it is required that at least half of the members of the Board of Directors attend that *Session* (Mexico 2006, Art. 143).
[151] In the case of outside proprietary directors, their substitute members might also be outside directors.
[152] The LMV also establishes that the chief executive officer, relevant employees or statutory auditors of any company of the business network or of the consortium cannot be members of the Board of Directors. Further, no individual, shareholder, client, supplier, debtor or creditor who has a significant influence in the controlling decisions of the company can be appointed to its Board (Mexico 2005, Art. 26).

active auditors are banned from being part of the board of directors of the companies of the business network; otherwise, cross-shareholdings are allowed. Moreover, the LMV highlights the fact that the BOD's performance should encourage *the creation of the value of the company*. Therefore, it is expected that the members of the board will provide a diligent, honest, confidential and loyal service to the company. Additionally, it is required that any member of the board experiencing a situation of conflict of interests will reveal it and avoid participating, deliberating and voting on that issue (Mexico 2005, Art.34).

Finally, the LMV states that overall rights of shareholders are: to have free access to information and documents related to the items in the shareholders' meeting agenda at least 15 days in advance of the day of such a meeting; to prevent the discussion of different issues under the same category in the agenda; and to be represented by someone else in the shareholders' meetings (Mexico 2005, Art.49). Shareholders possessing voting shares[153] that represent 10 percent of the capital of the company or more are allowed to appoint or revoke a director to the BOD; to ask the chairman of the BOD or the chairman of the auditing or the inter-corporate practices committees to call for a shareholders' meeting; and to postpone a shareholders' meeting for three days when they consider that there is not enough information to cast a vote on an item of the agenda. Further, shareholders possessing voting shares that represent 20 percent of the capital of the company or more can judicially oppose the resolutions of a shareholders' meeting where they have the right to vote (Mexico 2005, Arts.50-51).

Among the duties of shareholders, the LMV establishes that if an investor or group of investors want to acquire (directly or indirectly) at least 30 percent of the common shares of a company, they must do so via a tender offer (Mexico 2005, Art.98). This offer have to last for at least 20 working days, be extended to all classes of shares and grant the same payment without regard to the sort of shares acquired. The investor or group of investors, who directly or indirectly acquire at least 10 percent but at most 30 percent of the shares of a company, is required to publicise this situation on the next

[153] Voting shares are those that allow shareholders to participate in the decision-making process of the publicly traded companies by casting votes. Examples of these shares are ordinary shares, shares of limited voting rights and special shares.

working day following the acquisition. In the case of a group of investors, they must disclose the individual ownership percentages (Mexico 2005, Art.109).

In conclusion, notwithstanding the fact that Mexico is a country whose legislation is framed under the French civil-code patterns (thus it has lax laws and weak enforcement levels), the Mexican government aims to enhance the economic development of the country by diversifying the current financing sources. This economic development is thought to be achieved by achieving better corporate governance practices; facilitating the access for medium Mexican companies to the Mexican stock markets; strengthening the investor's rights; and improving provisions related to violations and sanctions, among others. However, although some deficiencies have been resolved, there are still others to be overcome, e.g. even though status proscribe equal cash-flow and voting rights, with one-share-one-vote, there is provision for up to 25% of non-voting equity (consistent with this model).

3.4.2 Empirical evidence

In this section, I present empirical evidence of ownership structure from a small sample of Mexican publicly traded companies.

I collected and analysed some corporate information regarding corporate charter provisions and ownership structure from 4 out of the 35 companies that form the Mexican Stock Exchange Index that is the Prices and Quotations Index (IPC). This information was mainly extracted from the Bylaws and the Annual Report (2005) submitted to the Mexican Banking and Securities Commission (CNBV) and to the American Stock Exchange Commission (SEC). The evidence from this sample suggests that these publicly traded companies are large business groups built into complex networks with multiple subsidiaries around the world. These companies are not only managed but also owned and controlled by their founder families. Furthermore, there is an extensive use of dual classes of shares which allows majority-voting rights to be reached while investing minimal amounts of capital. This is

consistent with my model, and may suggest that the incumbents in Mexican companies exhibit extreme risk aversion in the face of high economic volatility.

The main findings of this analysis are similar to those presented by Castañeda-Ramos (1999) regarding the business network structure used by large publicly traded companies. The importance of business networks structures may be, for ownership purposes, the facilitation of the use of pyramids which encourage achieving controlling positions by investing moderate amounts of capital. In this sample, companies B and C start their network with two main subsidiaries, while company D begins with ten. However, both cases finish with an endless number of sub-subsidiaries located around the world.

Regarding the management and control of these companies, the evidence suggests that the founders and their families are actively involved in the management and control of these companies. That is to say, in most companies their founders became the honorary lifetime chairman of the Board of Directors (BOD), while one of their direct descendents acts as the Chief Executive Officer (CEO) of the same company. Thus, the controlling decisions remain within the families of the founders. Moreover, because of the structure of business groups of these companies, the directors of the board can sit on the board of most of the companies of the business group, besides having cross-holding shares in all of them. These facts help the members of the founder families to have a privileged position in the decision-making process of the whole group, even though they could not be deemed as main holders because of their capital invested, but how this could happen? It seems to be the case that the aim of using dual classes of shares is to reduce the capital invested into companies while maintaining a controlling position, consistent with the highly risk-averse incumbents in my model.

In this sample, companies issue diverse classes of shares granting particular rights to their investors. However, despite the variety of shares, all of them can be categorised into three different groups defined as common shares, shares of limited voting rights and shares with no voting rights. In general, common shares are the only sort of shares that entitle equal cash-flow rights and voting rights per share. In contrast, shares of limited voting rights grant their holders preferred dividends but diminished voting

rights, and shares with no voting rights only entitle cash-flow rights. It is noteworthy that common shares are, most of the time, reserved for the founders and their families.

For example, company A issues two different capital instruments which are common shares and Certificates of Ordinary Participation[154] (CPO), and has as main groups of investors the founder families, foreign investors, and domestic investors. In this case, the founder families could be considered as the controlling shareholders of the company. This is because although these families only own 47.70 percent of the total capital, the percentage of their voting rights rises to 73.17 as the rights of CPOs, which account for 25.47 percent, are added to their threshold since foreign investors are not allowed to exercise their right to vote.

[154] CPO can be considered as a variety of shares of limited voting rights as they only allow their holders to vote as a block in the same way as the majority shareholders of their class.

Table 3.1 Types of shares company A

Corporate Charter provisions regarding the types of shares that can be issued	
Class I	Shares that constitute the fixed amount of capital, which cannot be withdrawn.
Class II	Shares that constitute the variable amount of capital, which can be withdrawn.
Series A	***Common Shares:*** They will represent at least 75% of the total capital and will grant one vote per share, except in special assemblies
Series L	***Voting shares of limited rights:*** These shares in conjunction with the class C shares cannot represent more than 25% of the total capital. These shares can only vote in the special meetings held for this sort of shares and in the extraordinary shareholders meetings.
Series C	***Shares without voting rights:*** Holders of these shares cannot vote in the shareholders' meeting, but in the special meetings held for this sort of shares.
CPOs	Titles representative of provisional rights on profits or specified assets. The fiduciary institution in charge of these titles will vote all the titles in the same way as the majority shareholders.

This table has been drawn up with information from the company bylaws.

Table 3.2 Ownership structure of Company A

SHARE OWNERSHIP STRUCTURE				
Class of Shares	*No. of shares*	*Percentage Capital*	*Percentage Voting*	*Real % Voting*
Class I Series A Shares (no par value)	**580,549,200**	100.00%	100.00%	
TOTAL SHARES	580,549,200	100.00%	100.00	
Founder families	276,927,496	47.70%	47.70%	**73.17%**
CPOs	147,878,765	25.47%	25.47%	0.00%
Others domestic investors	155,742,939	26.83%	26.83%	**26.83%**
TOTAL	**580,549,200**	**100.00%**	100.00%	**100.00%**

The table above reflects the ownership structure of Company A as of April 2006.

Company B issues three series of shares, of which two are common shares (series A and Series AA) and the other one are shares of limited voting rights. Company B also has three main investors, and they are represented by a domestic company, a foreign company and other Mexican investors. Some founders of company B control *the*

domestic company, which owns 40.46 percent of the total capital of Company B. This means that those founders indirectly control company B, as they own 40.46 percent of the total capital that actually represents 66.29 percent of the total votes. A noteworthy fact is that shares of limited voting rights account for 67.74 percent of the total capital, which might significantly reduce the quantity of common shares needed to achieve majority positions.

Table 3.3 Types of shares of company B

Corporate Charter provisions regarding the types of shares that can be issued	
Series AA	***Common Shares:*** These shares will represent at least 20 percent and at most 51 percent of the total capital. These shares will not represent less than 51 percent of the total common shares. Only Mexican investors can buy this class of shares. These shareholders are allowed to vote in ordinary and extraordinary shareholders' meetings, granting one vote per share.
Series A	***Common Shares:*** These shares will represent no more than 19.6 percent of the total capital and no more of 49 percent of the total common shares. These sorts of shares are of free subscription and holders are allowed to vote in ordinary and extraordinary shareholders' meetings, granting one vote per share.
Series L	***Shares of limited voting rights:*** These shares in conjunction with the shares Series A cannot represent more than the 80 percent of the total capital. This kind of shares are of free subscription, which means that Mexican investors, companies or foreign entities can posses them. These shareholders can only vote in the special meetings held for this sort of shares and will grant a preferred dividend.

This table has been drawn up with information from the company bylaws.

Table 3.4 Ownership structure (Summary) of Company B

SHARE OWNERSHIP STRUCTURE			
Class of Shares	*No. of shares*	*Percentage Capital*	*Percentage Voting*
Series AA	10,910,000,000	30.18%	93.55%
Series A	752,000,000	2.08%	6.45%
Series L* Except on limited matters for which L shares have vote	24,491,000,000	67.74%	0.00%
TOTAL SHARES	36,153,000,000	100.00%	100.00%

The table above presents a summary of the ownership structure of Company B as of April 2006.

Company C also has its capital issued in three different series of shares of which only one series represents common shares and the other two are shares of limited voting rights. Besides the fact that shares of limited voting rights[155] increase the absolute value of votes per common shares, the founder families of this company decided to put their shares altogether into a trust and vote them as a block. As result of these two facts, these founder families became the controlling holders of this company with only 37.08 percent of the capital, representing 71.75 percent of the total votes.

[155] Holders of shares of limited voting rights are not allowed to vote in ordinary shareholders' meeting, rather in extraordinary meetings that deal with the particular issues described in the corporate charter of each company.

Table 3.5 Ownership structure of Company B

Shareholders	AA SHARES			A SHARES			L SHARES			% TOTAL SHARES	% TOTAL VOTES
	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital		
Domestic Company	7,587,000,000	20.99%	**65.06%**	144,000,000	0.40%	**1.23%**	6,898,000,000	19.08%	**0.00%**	**40.46%**	**66.29%**
Foreign Company	2,870,000,000	7.94%	**24.61%**	0	0.00%	**0.00%**	0	0.00%	**0.00%**	**7.94%**	**24.61%**
Other Mexican holders	453,000,000	1.25%	**3.88%**	608,000,000	1.68%	**5.21%**	17,593,000,000	48.66%	**0.00%**	**51.60%**	**09.10%**
TOTAL	10,910,000,000	30.18%	**93.55%**	752,000,000	2.08%	**6.45%**	24,491,000,000	67.74%	**0.00%**	**100.00%**	**100.00%**
		30.18%			**2.08%**			**67.74%**		**100.00%**	**100.00%**

The table above depicts the ownership structure of Company B as of April 2006.

Table 3.6 Types of shares of Company C

Corporate Charter provisions regarding the types of shares that can be issued	
Series B	***Common Shares:*** These shares will represent at least 51 percent of the total capital. Holders of these shares are allowed to vote in ordinary and extraordinary shareholders' meetings, granting one vote per share.
Series L	***Shares of limited voting rights:*** These shares can represent up to 25 percent of the total capital. Holders of these shares are allowed to vote in extraordinary shareholders' meetings that discuss the limited matters described below *****.
Series D	***Shares of limited voting rights:*** These shares can represent, individually or with L shares, up to 49 percent of the total capital. These shares will have a non-accumulative dividend equivalent to 125 percent of the decreed dividends to B Shares. Holders of these shares are allowed to vote in extraordinary shareholders' meetings that discuss the matters described below *.
Sub-series DB	***Shares of limited voting rights:*** These shares can represent the rest of the series D.
Sub-series DL	***Shares of limited voting rights:*** These shares can represent up to 25 percent of the series D shares.

***** D shares have the right to vote in the following matters: a transformation of the Company; any merger when Company C would not survive or when the business purpose of the other company would differ from that of Company C; change of the nationality; dissolution and liquidation; and cancellation of the register of these shares. Furthermore, this class of shares has the right to appoint two directors, and their alternates, to the BOD.

This table has been drawn up with information from the company Bylaws.

Table 3.7 Ownership structure (Summary) of Company C

SHARE OWNERSHIP STRUCTURE			
Class of Shares	*No. of shares*	*% Capital*	*% Votes*
Series B	3,082,140,090	51.68%	100.00%
Sub-series DB	1,440,785,180	24.16%	0.00%
Sub-series DL	1,440,785,180	24.16%	0.00%
TOTAL SHARES	5,963,710,450	100.00%	100.00%

The table above presents a summary of the ownership structure of Company C as of April 2006.

Table 3.8 Ownership structure of Company C

Shareholders	B SHARES			DB SHARES			DL SHARES			% TOTAL SHARES	% TOTAL VOTES
	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital		
Trust "Voto"	2,211,344,965	37.08%	**71.75%**	0	0.00%	**0.00%**	0	0.00%	**0.00%**	**37.08%**	**71.75%**
Co. C Employees	13,488,169	0.23%	**0.44%**	7,226,098	0.12%	**0.00%**	7,226,098	0.12%	**0.00%**	**0.47%**	**0.44%**
Other Investors	823,412,903	13.81%	**26.72%**	1,407,876,286	23.61%	**0.00%**	1,407,876,286	23.61%	**0.00%**	**61.02%**	**26.72%**
Executive Manager A	4,480,268	0.08%	**0.15%**	8,884,936	0.15%	**0.00%**	8,884,936	0.15%	**0.00%**	**0.37%**	**0.15%**
Executive Manager B	2,497,034	0.04%	**0.08%**	4,992,068	0.08%	**0.00%**	4,992,068	0.08%	**0.00%**	**0.21%**	**0.08%**
Executive Manager C	23,133,925	0.39%	**0.75%**	4,251,650	0.07%	**0.00%**	4,251,650	0.07%	**0.00%**	**0.53%**	**0.75%**
Executive Manager D	1,717,115	0.03%	**0.06%**	3,434,230	0.06%	**0.00%**	3,434,230	0.06%	**0.00%**	**0.14%**	**0.06%**
Executive Manager E	2,065,711	0.03%	**0.07%**	4,119,912	0.07%	**0.00%**	4,119,912	0.07%	**0.00%**	**0.17%**	**0.07%**
TOTAL	3,082,140,090	51.68%	**100.00%**	1,440,785,180	24.16%	**0.00%**	1,440,785,180	24.16%	**0.00%**	**100.00%**	**100.00%**
		51.68%			**24.16%**			**24.16%**		**100.00%**	

The table above depicts the ownership structure of Company C as of April 2006.

Finally, it seems that company D presents the extreme case in discrepancy between cash-flow rights and voting rights. Company D has its capital issued in two different classes of shares: common shares and shares of limited voting rights. Each of these two classes is divided into two different series of shares, and each class represents around the half of the capital. However, it could be argued that there is only one potential controlling owner in this company. This is because first, the main founders of the company established a trust for their shares, allowing other investors to buy shares from this trust. Second, most of the common shares are sold as CPOs instruments. Third, there are outstanding shares of limited voting rights. All these make it plausible that the investor who owns the majority of the common shares of this trust will benefit from the votes corresponding to the thresholds of the other investors of the trust. Further, he/she will also add the votes of the thresholds of the investors of CPOs of common shares. In other words, investor "A", owning around 15 percent of the total capital, is the beneficiary of almost 72 percent of the total votes of Company D. This is because investor "A" owns the majority of the common shares of the trust, which gives him/her the votes of the rest of the investors of this trust, and the votes of the thresholds of the CPOs' investors of A shares, which account for an additional 40 percent of votes.

Table 3.9 Types of shares of Company D

Corporate Charter provisions regarding the types of shares that can be issued	
Series A	***Common Shares:*** Holders of A Shares have the right to vote on all matters subject to shareholder approval at any general shareholders' meeting. Besides requiring approval by a majority of all Shares entitled to vote together on a particular corporate matter, certain corporate matters must be approved *by a majority of the holders of A Shares voting separately*. These matters include ***mergers, dividend payments, spin-offs, changes in corporate purpose, changes of nationality and amendments to the anti-takeover provisions of our bylaws***.
Series B	***Common Shares:*** Holders of B Shares have the right to vote on all matters subject to shareholder approval at ***any*** general shareholders' meeting. B shareholders have the right to vote at special meetings of B Shares, on any matter subject to approval at such a meeting. Under Mexican law, non-Mexicans may not own B Shares directly or exercise any voting rights in respect of B Shares, *but they may hold B Shares indirectly through the CPO Trust*, ***which will control the voting of the B Shares***.
Series D	***Shares of limited voting rights:*** Holders of D Shares are entitled to receive a cumulative fixed preferred annual dividend. They are also entitled to vote on the following matters at extraordinary general meetings: transformation from one type of company to another; any merger (even if we are the surviving entity); extension of the business life of the company; dissolution before the prescribed duration; any change in the corporate purpose; a change in the nationality; and the cancellation from registration of the D Shares with any Mexican or foreign stock exchange in which such shares or securities are registered.
Series L	***Shares of limited voting rights:*** Holders of L Shares are entitled to vote at extraordinary general meetings on the following matters: transformation from one type of company to another; any merger in which *the company* is not the surviving entity; and the cancellation from registration of the L Shares or the securities that represent the L Shares with the special section of the NRS.

This table has been drawn up with information from the company Bylaws.

Table 3.10 Ownership structure (Summary) of Company D

SHARE OWNERSHIP STRUCTURE			
Class of Shares	*No. of shares*	*% Capital*	*% Votes*
Series A	123,478,023,925	33.98%	67.61%
Series B	59,162,448,976	16.28%	32.39%
Series D	90,372,213,365	24.87%	0.00%
Series L	90,372,213,365	24.87%	0.00%
TOTAL SHARES	363,384,899,631	100.00%	100.00%

The table above presents a summary of the ownership structure of Company D as of May2006.

Table 3.11 Ownership structure of Company D

Shareholders	A SHARES			B SHARES			D SHARES			L Shares			% TOTAL CAPITAL	TOTAL VOTES	REAL % VOTES
	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital	Shares owned	% shares / total capital	% votes per total capital			
TRUST	54,649,375,593	15.04%	**29.92%**	1,526,458,516	0.42%	**0.84%**	2,428,456,730	0.67%	**0.00%**	2,428,456,730	0.67%	**0.00%**	**16.80%**	**30.76%**	**71.67%**
Foreign Company A	3,435,215,250	0.95%	**1.88%**	3,022,989,420	0.83%	**1.66%**	4,809,301,350	1.32%	**0.00%**	4,809,301,350	1.32%	**0.00%**	**4.42%**	**3.54%**	**0.00%**
Foreign Company B	3,266,224,500	0.90%	**1.79%**	2,874,277,560	0.79%	**1.57%**	4,572,714,300	1.26%	**0.00%**	4,572,714,300	1.26%	**0.00%**	**4.21%**	**3.36%**	**0.00%**
Other **CPOs** Investors	62,127,208,582	17.10%	**34.02%**	51,738,723,480	14.24%	**28.33%**	78,561,740,985	21.62%	**0.00%**	78,561,740,985	21.62%	**0.00%**	**74.57%**	**62.34%**	**28.33%**
TOTAL	**123,478,023,925**	**33.98%**	**67.61%**	**59,162,448,976**	**16.28%**	**32.39%**	**90,372,213,365**	**24.87%**	**0.00%**	**90,372,213,365**	**24.87%**	**0.00%**	**100.00%**	**100.00%**	**100.00%**
		33.98%			**16.28%**			**24.87%**			**24.87%**		**100.00%**		
TRUST															
Investor A	52,991,825,693	14.58%	**29.01%**	67,814,604	0.02%	**0.04%**	107,886,870	0.03%	**0.00%**	107,886,870	0.03%	**0.00%**	**14.66%**	**29.05%**	
Other investors	1,657,549,900	0.46%	**0.91%**	1,458,643,912	0.40%	**0.80%**	2,320,569,860	0.64%	**0.00%**	2,320,569,860	0.64%	**0.00%**	**2.13%**	**1.71%**	
Total	54,649,375,593	15.04%	**29.92%**	1,526,458,516	0.42%	**0.84%**	2,428,456,730	0.67%	**0.00%**	2,428,456,730	0.67%	**0.00%**	**16.80%**	**30.76%**	

The table above depicts the ownership structure of Company D as of May 2006.

In conclusion, this evidence proposes that the business group structure used by these large Mexican publicly traded companies offers them two main advantages, to participate (with a privileged role) in the management and decision-making process of the entire business group, and to benefit from the use of dual classes of shares. Dual classes of shares can be considered as a financial strategy which helps the founders and their families to have the majority of the voting rights with moderate capital investments. Finally, as expected, dual classes of shares might benefit major owners at expense of minority investors.

3.5 Conclusions and Final Remarks

I have analysed the factors that may be responsible for inducing a separation of cash flow rights and control rights in developing economies. Employing a game-theoretic model, I have focused on two control mechanisms (viz. the majority rule and non-voting equity). I demonstrate that (a) high risk-aversion induces an incumbent manager to wish to minimise his equity stake; (b) high private benefits imply that the incumbent would wish to retain control (therefore, he wishes to maximise his control rights while minimising his equity stake); (c) a social planner sympathetic to the incumbent will facilitate the NCS structure by allowing him to issue non-voting equity, and (d) investor irrationality (whereby investors do not understand the control structure) makes the NCS structure even easier to achieve.

I argued that the emerging Mexican financial market may be characterised by these factors. Indeed, my empirical evidence agrees with the findings of Castañeda Ramos (1999) that shows that the corporate structure of large Mexican companies features a large discrepancy between cash flow and control rights. Common practices that can be considered as characteristic features of corporate governance of these firms are as follows. Firstly, there is an extensive use of pyramids and dual classes of shares by inside investors, which may produce the pronounced discrepancy of control and cash-flow rights. Further, large Mexican companies also issue American Depository Receipts (ADRs) and neutral funds, since they entitle cash flow rights rather than

voting rights[156]. Finally, cross shareholding and exchange of positions in the boards of directors among associated entrepreneurs are also frequent practices.

This model provides a basis for further research investigating empirically the effects of separating control rights from cash-flow rights in the financing policies of the Mexican publicly traded companies. Recalling Jensen and Mecklings' (1986) argument regarding the agency costs from aligning managers' and investors' interests and recalling also my findings which agree with those of Castañeda Ramos (1999), Babatz Torres (1997) and Husted and Serrano (2002), I should expect to find a positive correlation between family control and levels of debt. This should be the case as there are no interests to align since owners and managers are the same people. However, taking into account that Mexican corporate legislation somehow still allows the issuance of dual-class shares, that the legislation system is lax at protecting minority investors' rights and that Mexican companies have a diversity of multi-right securities, I expect to find a negative correlation between family control and debt. This negative correlation may support the argument of Hagelin *et al*. (2006) suggesting that family-controlled firms may favour multi-voting right equity issuances to both maintain control and to reduce business risk. I also expect to find moderate levels of debt.

Further, I anticipate that all the effects are better reflected in short-term debt levels than in total or long term-term debt levels as emerging economies have been demonstrated to be substantially financed through *trade-credit* via suppliers and creditors (Booth *et al*. 2001 and Glen and Singh 2004).

[156]It is noteworthy that both financial figures benefit controlling shareholders since their titles usually have to be voted as the majority does

Chapter 4

Theoretical Model:
Mexican Business Groups, Empathy and Market Crashes

As discussed previously in the Literature Review Chapter, corporate organisational structures and the associated corporate governance mechanisms vary around the world. Scholars have identified that these variations may depend crucially on local legal systems, the degree of investor and creditor protection, market imperfections and national culture.

One development that has occurred markedly in some countries is the creation, evolution and prevalence of business groups. However, such networks are few or even non-existent in other countries (Colpan and Hikino, 2010). Langlois (2009) argues that business groups are informational mechanisms that fill the gaps created by the needs of the particular macroeconomic environment (i.e. emerging economies or developed economies) where they operate. Scholars, such as Castañeda (2002, 2005 and 2007), Khanna and Yafeh (2007), Langlois (2009), Schneider (2009) and Colpan and Hikino (2010) notice that business groups are more prominent in developing countries, which are endowed with emerging capital and product markets, weak legal systems and poor investor protection.

The focus of this chapter is on business groups in Mexico. Mexico is characterised by the factors required for the development of such groups, i.e. inefficient legal and enforcement systems and developing markets. Furthermore, Mexico is of interest as Castañeda (2005 and 2007) demonstrated that Mexican business networks have served to protect corporations from recent macro-economic crashes.

This chapter addresses the following research questions. Why are business networks so prevalent in developing economies, such as Mexico? How do the factors identified

contribute to their formation? How do they serve to provide protection to network members during economic downturns?

In order to answer these questions, a game-theoretic approach is developed in which firms first decide whether to form a business group. Next, they borrow from the banking sector in order to finance production. Following the analysis of Castañeda (2007), these firms may face normal economic conditions or they may face an economic crash. This investigation analyses the conditions for the group to form in the first place and how the group may protect its members in the case of a negative economic shock.

In addition to the economic factors affecting business groups, this model features the following major development, which is the consideration of behavioural factors affecting the network. In particular, I focus on the possibility of empathy/trust between members. This model demonstrates that such behavioural 'other-regarding' preferences may be crucial in understanding the effect of cultural differences on business network-formation.

The remainder of the Chapter is organised as follows. Section 1 presents a survey of relevant literature. Section 2 presents the model and derives the results. Section 3 discusses the policy implications of this analysis. Section 4 concludes.

This researcher wishes to mention that the terms 'business groups' and 'business networks' are used interchangeably throughout this chapter.

4.1. Literature Review

Business groups have been defined as *'... an economic coordination mechanism in which legally independent companies utilize the collaborative arrangements to enhance their collective economic welfare'* (Colpan and Hikino 2010, p. 17).

At present, there is no consensus with respect to the ultimate economic and social effect of business groups. Some scholars agree with the idea that they are detrimental to economies, whereas others perceive them as a solution to institutional and market failures.

According to Khanna and Rivkin (2001 p. 46), the detrimental argument explains that business groups exist as *'...a response to market failures*[157] *that arise in the particular institutional contexts of emerging economies',* but hardly to promote an efficient functioning of markets. For example, Castañeda-Ramos (1999) mentioned that business groups in Mexico were considered as the product of poor legal systems where minority investors and creditors were protected inadequately, if at all, and the law-enforcement systems were flawed. Further, Castañeda-Ramos (1999) also pointed out that business groups may enhance rent extraction problems as their structural organisation usually facilitate the use of dual-class shares (via pyramids and/or cross-shareholding), favouring concentrated ownership structures which do not follow the one-share one-vote rule.

On the other hand, the fostering/beneficial concept argues that business groups can be beneficial not only to their affiliated members but also to society, enhancing social welfare when these groups *'... fill the voids left by the missing institutions that normally underpin the efficient functioning of product, capital and labour markets'* (Khanna and Rivkin 2001, pp. 46-47). For instance, business groups facing financing problems because of their poor disclosure practices and minimal legal protection for minority shareholders and creditors' rights, and/or having the need for institutions to be created to regulate a venture capital sector may overcome these problems by *'transferring capital within the group and by underwriting security issues with the entire group's reputation'* (Khanna and Rivkin 2001 p. 49). Further, business groups can also help to solve certain inefficiencies of product and input markets. They also can help in the process of the cross-border transfer of technology and capital by putting their reputation at stake. In both of these two cases, the well-known business reputation might substantially decrease the risk of opportunistic behaviour against investors, creditors and lenders occurring. For example, in the first case, through the

[157] Khanna and Rivkin's (2001) research explores the most common failures of diverse markets such as: capital, labour, product and technology markets, among others.

business group commitment to honour the terms of the contract signed (e.g. quantity and quality of the products); whilst in the second, by the guaranteed avoidance of the expropriation of intellectual property because of the risk of losing their reputation (Khanna and Rivkin 2001).

Furthermore, Castañeda (2005 and 2007) demonstrated that under particular circumstances, such as national financial disarray, business groups might prefer to overcome the financial constraints by acting as *affiliated* companies rather than individual profit centres, and by initiating internal markets by channelling financial funds to the firms that are not able to get them outside the group.

4.1.1 Business Groups in Mexico

According to Hoshino (2010), Mexican business groups can be defined as:

> *'... a large scale business entity [...] that consists of a large group of companies that are under the common control of an owner family. Group companies form a hierarchical shareholding structure with a holding company at its apex that is generally listed on stock exchanges'* (p. 424).

Further, Khanna and Yafeh (2007) noticed that family ties are the fundamental element in Mexican business groups. For example, the largest industrial groups in certain regions are still run by their family founders who started them with strong governmental support around the 1850s.

Mexican business groups, according to Castañeda-Ramos (1999) and Babatz (1999), are similar to the typical business groups of emerging economies, but particularly those of Latin America. The essential features being the following; (*i*) the ownership and control of these business groups belongs to families or closed groups of investors; (*ii*) it is a common practice to issue dual-class shares and financial instruments with no-voting rights, besides the use of pyramids and cross-shareholdings; (*iii*) there are horizontal and vertical links between the companies forming the business group, which allow them to take advantage of economies of scale or scope, reduced transaction

costs, monopolistic profits and diversification of risk; and (*iv*) banks or financial institutions are often part of the business group.

According to Hoshino (2010), business groups emerged and flourished in Mexico during the period when the economic policy of import substitution industrialisation (ISI) was enforced. Mexican business groups were the means designed and used by Mexican capitalists to compensate/substitute for the underdeveloped Mexican economic environment reflected in its market institutions, and the shortage of capital and human resources. A detailed account of these preferential governmental policies/directives is offered by Khanna and Yafeh (2007, p. 354).

> *'Until the mid 1980s, the government supported business groups by protecting many sectors through tariffs and trade restrictions, as well as by granting discretionary concessions (for example, in media, mining and other sectors), as well* [as] *direct and indirect subsidies to certain goods and industries (e.g. sugar). Groups also enjoyed monopolies, state-induced consolidation and certain protection from FDI'.*

Further, Schneider (2009) argues that besides the numerous market advantages that business groups get from their relationship with governments, they also benefit from having a level of participation in politics[158]. The most general but powerful advantage is the access to and use of economic and political information, which at the same time facilitates coordination and communication for governments. For instance, thorough Latin America it is a common practice to convene, formally or informally, the heads of the largest business groups when policy makers need information or cooperation. This interaction offers business groups' owners ample opportunity to present their views and gain substantial advantage in terms of information on policy making. In the case of Mexico, there is a council which all major business group owners belong to, the Consejo Mexicano de Hombres de Negocios[159] -CMHN- (Mexican Council of Businessmen). This council meets once a month with a government minister and at least once a year with the President (Schneider 2009).

[158] Business groups through their participation in politics have access to the policy-making process. Nevertheless, this does not mean that BGs can dictate or veto policies (Schneider 2009).
[159] This council (CMHN) has around 40 members affiliated only by invitation. The CMHN explicitly excludes MNCs and smaller firms (Schneider 2009).

It is of note that these advantages, although substantial, are not a guarantee of longevity/continuity for business groups. However, the capability of GBs to adapt to the different environments in which they operate might be more of a guarantee. This is reflected in the variety of levels of involvement that business groups select with respect to politics, to seek rents, to follow government policies and to prosper through politics.

Analysing the role of business groups in helping Mexico recover from the financial crisis that occurred in the second half of the 1990s, Castañeda (2007) developed a theoretical model that provides a rationale for the phenomenal recovery that occurred in Mexico after 1995. The ensuing banking crisis resulted in new lending to businesses being curtailed as aggregate demand fell considerably, and as annual GDP growth fell to -10% by mid 1995. Furthermore, Castañeda (2007 pp. 1-3) noted that:

> '*...real outstanding debt granted by commercial banks to the non-financial private sector diminished by 72% between 1995 and the first semester of 2000*'. [However,] *'...not only did the economy rebound within a year, but also grew steadily afterwards, averaging an annual rate slightly above 5% from 1996 to 2000.* [...] *Hence, the macroeconomic upturn is a striking phenomenon that deserves further explanation.'*

Castañeda's (2007) model suggests that the organisational structure of the Mexican business groups was able to protect the non-tradable firms from the effects of the severe financial/banking crisis, by ameliorating moral hazard problems within those groups as long as affiliated firms surrendered their control rights. Moreover, business groups might also have participated in the formation of internal capital markets through internal financing arrangements.

> *'According to a survey of 500 firms carried out by Mexico's central bank for the 1998-2001 period, the credit granted by commercial banks was less than half the credit provided by suppliers since 1999. Adding up trade credit and direct financing from affiliates in the business group, 55-70% of the total credit was from nonbanking network sources.'*

4.2 The Model

This model considers businesses operating in a developing economy. These businesses are cash-constrained, and must borrow from the banking sector in order to produce goods for sale in the product market. Furthermore, the firms are aware that they may face good economic conditions, or they may face an economic crash. The firms firstly decide whether to form a business network at cost. Forming the network creates a degree of empathy between the participants, which may serve to protect them from future economic stress. Thus, the decision to form the network is affected by the cost of forming the network, the level of empathy created, and the firms' expectation of future economic conditions.

Following the firms' decision to form the network, the economic conditions are revealed. Following that, they borrow from a bank (if the bank is prepared to provide finance), in order to finance production. Next, if the bank has provided finance, the firms exert effort in production. Finally, their projects succeed or fail.

This analysis is simplified by focussing an economy consisting of two risk-neutral firms, $i \in \{A, B\}$. The discount rate is zero. The detailed timeline of the game is as follows.

Date 0:

The firms decide whether to form a business network (at cost $K \geq 0$), or stay in isolation. I assume that both firms must invest K in order for the network to form. If only one firm, or if neither firm, invests, the network is unable to form.

If they form a network, empathy is created. This is operationalised in the model as an enhancement to success revenue (see date 3 below), due to the assistance that they provide to each other.

Date 1:

Economic conditions are revealed, represented as $k \in \{b, g\}$ respectively, bad conditions (economic crash), and good (normal) conditions. Whether they formed the

network or not, each firm approaches a (different) bank $j \in \{a, b\}$ (that is firm $A(B)$ borrows from bank $a(b)$) to borrow the required finance $I > 0$ at bank $j's$ loan rate $r_j > 0$. The banking sector is competitive, and therefore each bank sets its loan rate such that the bank lends at zero expected NPV (that is, each bank 'breaks-even' in present value terms).

Date 2:

If a firm is able to obtain finance, it then produces goods for sale in the product market (the 'production project'). Each firm's project may succeed (with probability p) or fail (with probability $1-p$). Project success depends on a firm's efforts: specifically, the probability of success is $p = \gamma_k e_i$, where e_i represents firm $i's$ effort level, and γ_k represents the firm's ability. Furthermore, $\gamma_g > \gamma_b$; that is, each firm's success-creating ability is higher when the economy is good than when it is bad.

Date 3:

Each firm's project succeeds, providing income $R_i(1+\Delta_k) > 0$, or fails (providing zero income), with $R_A > R_B$. Therefore, firm A is superior to firm B, since, in the case of success, it produces a higher income. I note that Δ_k represents the enhancement to each firm's success income upon forming the network, due to empathetic information-sharing and cross-firm assistance in the network. If the network is not formed, $\Delta_k = 0$. Furthermore, I assume the following:

$$\Delta_g = 0;\ \Delta_b = \theta > 0. \qquad \text{(A:1)}$$

That is, in the good (normal) state of the economy, the network is unable to add empathetic value (the rationale for this is as follows: in the good state, the firms are able to create high income in the case of success in the absence of network benefits. Therefore, the network is unable to add further value). In this model, it is particularly in the case of the bad realisation of the economy that the empathetic relationship created by the network is translated into value creation. I demonstrate subsequently that, due to assumption A.1, this model predicts that there is a greater likelihood of networks forming when countries face a higher probability of economic turmoil (such as emerging economies).

I proceed to solve the game by backward induction.

4.2.1 Date 2 Effort Levels

First, taking as given a) the firms' date 0 network-forming decision, b) the date 1 revelation of economic conditions (good or bad), and c) that the firms have been able to borrow from the bank to finance production at date 1. I proceed to solve for their optimal date 2 effort levels at the production stage.

The firms exert effort to maximise the following payoffs:

$$\Pi_A = P_A\left(R_A(1+\Delta_k)(1-r_A)\right) - \beta e_A{}^2 \quad (1)$$

$$\Pi_B = P_B\left(R_B(1+\Delta_k)(1-r_B)\right) - \beta e_B{}^2 \quad (2)$$

Where $P_A = \gamma_k e_A$, $P_B = \gamma_k e_B$.

Recall that each firm's ability to affect the probability of success is affected by the economic conditions, as represented by γ_k, with $k \in \{b, g\}$ and $\gamma_g > \gamma_b$.

Solving $\frac{\partial \Pi_A}{\partial e_A} = 0$, $\frac{\partial \Pi_B}{\partial e_B} = 0$, I obtain their optimal effort levels. I then substitute these effort levels into (1) and (2) to obtain the firms' expected payoffs:

Lemma 1*: Given the date 0 network-forming decision, and that the firms have been able to obtain bank finance at date 1, their optimal effort levels*[160] *are as follows:*

$$e_A{}^* = \frac{\gamma_k\left(R_A(1+\Delta_k)(1-r_A)\right)}{2\beta} \qquad e_B{}^* = \frac{\gamma_k\left(R_B(1+\Delta_k)(1-r_B)\right)}{2\beta} \quad (3)$$

$$\Pi_A = \frac{\gamma_k{}^2\left(R_A(1+\Delta_k)(1-r_A)\right)^2}{4\beta} \qquad \Pi_B = \frac{\gamma_k{}^2\left(R_B(1+\Delta_k)(1-r_B)\right)^2}{4\beta} \quad (4)$$

[160] Henceforth, I drop the subscript ik on the ability parameter γ in order to avoid cluttering the notation. I re-introduce the subscript later when it is need it.

4.2.2 Date 1: Banks' lending decision

I now move back to date 1 to consider the banks' lending decision. Banks decide a) whether to provide a loan, and b) if so, the loan rate.

I assume that the banking sector is competitive, which implies that they lend at zero NPV. Therefore, each bank's loan rate satisfies the equation:

$$\Pi_{b1} = P_A R_A (1+\Delta_k) r_A - I = 0 \tag{5}$$

$$\Pi_{b2} = P_B R_B (1+\Delta_k) r_B - I = 0 \tag{6}$$

Substituting the firms' optimal effort levels from lemma 1 into the probability functions, I obtain:

$$P_A = \gamma_k e_A = \frac{{\gamma_k}^2 \left(R_A (1+\Delta_k)(1-r_A)\right)}{2\beta}, P_B = \frac{{\gamma_k}^2 \left(R_B (1+\Delta_k)(1-r_B)\right)}{2\beta} \tag{7}$$

Substituting (7) into (5) and (6) respectively, I am able to solve to obtain each bank's equilibrium loan rate. I observe that this involves solving a quadratic in the loan rate. Thus there are two possible loan rates (high and low) that satisfy the quadratic. Due to bank (Bertrand) competition, the loan rate is competed down to the lower root of the quadratic. Hence:

Lemma 2: *Given the banks' rational expectation of the effect of the loan rate on firms' subsequent behaviour at the date 2 production stage, the competitive banking sector's date 1 loan rates are:*

$$r_A^* = \frac{R_A}{2} - \frac{\sqrt{{\gamma_k}^2 {R_A}^2 (1+\Delta_k)^2 - 8\beta I}}{2\gamma_k (1+\Delta_k)} \tag{8}$$

$$r_B^* = \frac{R_B}{2} - \frac{\sqrt{{\gamma_k}^2 {R_B}^2 (1+\Delta_k)^2 - 8\beta I}}{2\gamma_k (1+\Delta_k)} \tag{9}$$

Examination of (8) and (9) reveals that loan rates exist satisfying (5) and (6) (that is, bank j is only prepared to lend at rate r_j *) iff

$$\gamma_k{}^2 R_i{}^2 (1+\Delta_k)^2 \geq 8\beta I . \tag{10}$$

If condition (10) is satisfied, the firm is able to obtain bank finance. Substituting (8) and (9) into (6), I obtain the firms' equilibrium payoffs, given that (10) holds:

$$\Pi_A{}^* = \frac{\gamma_k{}^2}{4\beta}\left(\frac{R_A}{2} + \frac{\sqrt{\gamma_{k^2} R_A{}^2 (1+\Delta_k)^2 - 8\beta I}}{2\gamma_k (1+\Delta_k)}\right)^2 \tag{11}$$

$$\Pi_B{}^* = \frac{\gamma_k{}^2}{4\beta}\left(\frac{R_B(1+\Delta_k)}{2} + \frac{\sqrt{\gamma_k{}^2 R_B{}^2 (1+\Delta_k)^2 - 8\beta I}}{2\gamma_k (1+\Delta_k)}\right)^2 \tag{12}$$

If condition (8) is not satisfied, then there is not a loan rate that satisfies (3) and (4). The bank is not prepared to lend (it is unable to find a loan rate at which it breaks even), and the firm's payoff is zero.

4.2.3 Firms' date 0 network-forming decision.

I now move back to date 0 to consider the firms' decision to form the network at cost $K > 0$. At this stage, the firms have an expectation of the future economic conditions, and the effect on their ability to obtain bank loans, and the effect on the loan rate.

At date 0, the probabilities of the good, medium and bad states of the economy are q, r, and $1-q-r$ respectively.

I make the following assumptions in the case that the network is not formed (so that no empathy is created: $\Delta_k = 0$).

$$\gamma_g{}^2 R_A{}^2 > \gamma_g{}^2 R_B{}^2 \geq 8\beta I . \tag{A:2}$$

$$\gamma_b{}^2 R_A{}^2 \geq 8\beta I > \gamma_b{}^2 R_B{}^2 . \tag{A:3}$$

Given condition (10), these assumptions imply that, when the network is not formed, then a) when the economy turns out to be good (normal conditions), both firms are

able to obtain bank finance for production, b) when the economy turns out to be bad (economic downturn), only firm A is able to obtain bank finance.

In order for empathy to be created in the network, both firms must be able to obtain finance. Furthermore, recall that, in assumption A:1, I assumed that empathy can only be created in the 'bad economic condition' case: (recall that $\Delta_g = 0$; $\Delta_B = \theta > 0$). Thus, I only need to consider the effect of empathy on the banks' lending decision in the bad case.

From A:3, I note the following. If economic conditions turn out to be bad, the bank will only lend to firm A in the absence of the network. Banks will lend to both firms if the network is created, but only iff $\gamma_b{}^2 R_A{}^2 (1+\theta)^2 > \gamma_b{}^2 R_B{}^2 (1+\theta)^2 \geq 8\beta I$. I define a critical level of empathy θ' such that $\gamma_b{}^2 R_B{}^2 (1+\theta)^2 = 8\beta I$. Therefore, in the case of bad economic conditions, if the firms form a network, banks will lend to both firms iff network-empathy exceeds the critical level; that is, iff

$$\theta \geq \theta' = \sqrt{\frac{8\beta I}{\gamma_b{}^2 R_B{}^2}} - 1 \qquad (13)$$

Therefore, I am able to state the following results:

Table 4.1 Which firms get finance?

Economic State	*No Network*	*Network forms:* $\theta < \theta'$	*Network forms* $\theta' \leq \theta$
Good	Both firms receive bank finance	Both firms (but zero empathy-enhancement)	Both firms (but zero empathy-enhancement)
Bad	Only firm A receives bank finance	Only firm A (zero empathy-enhancement)	Both firms (empathy enhancement ($\Delta = \theta$)

Next, I proceed to consider the firms' decision to form the network at date 0.

I consider the following. Each firm can form the network at cost $K > 0$ each (both firms need to invest this in order for the network to form). If only one expends it, the network does not form.

When deciding whether to form the network, the firms are aware that the good and bad states occur with respective probabilities q, $1-q$. The firms' decision to form the network can be considered in the following normal form game.

A\B	Invest in network	Do NOT Invest in network
Invest in Network	1, 2	3, 4
Do NOT Invest in Network	5, 6	7+, 8 -

Case 1: $\theta > \theta'$.

From *table 4.1*, if the network forms, empathy is sufficiently high that both firms obtain bank finance, and success revenue is enhanced by the empathy parameter. The firms' payoffs from the various combinations of choices in the normal form game are as follows:

$$E(\prod_A) = q\prod_A(g/0) + (1-q)\prod_A(b/\theta) - K. \quad \text{(G1)}$$

$$E(\prod_B) = q\prod_B(g/0) + (1-q)\prod_B(b/\theta) - K. \quad \text{(G2)}$$

$$E(\prod_A) = q\prod_A(g/0) + (1-q)\prod_A(b/0) - K. \quad \text{(G3)}$$

$$E(\prod_B) = q\prod_B(g/0) + (1-q).0. \quad \text{(G4)}$$

$$E(\prod_A) = q\prod_A(g/0) + (1-q)\prod_A(b/0). \quad \text{(G5)}$$

$$E(\prod_B) = q\prod_B(g/0) + (1-q).0 - K. \quad \text{(G6)}$$

$$E(\prod_A) = q\prod_A(g/0) + (1-q)\prod_A(b/0). \quad \text{(G7)}$$

$$E(\prod_B) = q\prod_B(g/0) + (1-q).0. \quad \text{(G8)}$$

Where, in each payoff, the terms in brackets represent $(k \in \{g,b\}/\Delta \in \{\theta,0\})$: that is the firm's payoff given the economic conditions and the level of empathy enhancement, given the formation, or non-formation, of the network. These payoffs represent equations (9) and (10). I note that $\prod_B(b/0) = 0$.

In order to solve for the equilibrium, I need to consider each firm's best responses, as follows:

$$\text{(G2)} \geq \text{(G4) iff } (1-q)\prod_B(b/\theta) \geq K. \quad \text{(C1)}$$

$$\text{(G1)} \geq \text{(G5) iff } (1-q)[\prod_A(b/\theta) - \prod_A(b/0)] \geq K. \quad \text{(C2)}$$

Furthermore, I note that (G8) > (G6) for sure, and (G7) > (G3) for sure. That is, if a firm is not expecting the other to invest in the network, that firms' best response is also not to invest (since both firms are required to invest in order for the network to be created). This is marked on the normal form game. Thus, one equilibrium of the game is {DI, DI} for any level of empathy.

Next, I assume that $\prod_A(b/\theta) - \prod_A(b/0) > \prod_B(b/\theta)$; that is, the payoff-enhancement to investing in the network, given that the other firm has invested, is larger for firm A than firm B. I support this assumption with our subsequent numerical analysis.

Thus, I am able to state the following:

Proposition 1: *When $\theta > \theta'$ (network-empathy is sufficiently large that both firms are able to obtain bank-finance in the bad economic state after the network forms):*

a) *If* $(1-q)(\prod_A(b/\theta) - \prod_A(b/0)) > (1-q)(\prod_B(b/\theta)) \geq K$; , *the multiple equilibria are {I, I} and {DI, DI}. I assume that the firms coordinate on {I, I}.*

b) *If* $(1-q)(\prod_A(b/\theta) - \prod_A(b/0)) > K > (1-q)(\prod_B(b/\theta))$; *B's dominant strategy is not to invest. A's best response is not to invest. Therefore, the equilibrium is {DI, DI}*

c) *If* $K > (1-q)(\prod_A(b/\theta) - \prod_A(b/0)) > (1-q)(\prod_B(b/\theta))$; *each firm's dominant strategy is not to invest. Therefore, the equilibrium is {DI, DI}.*

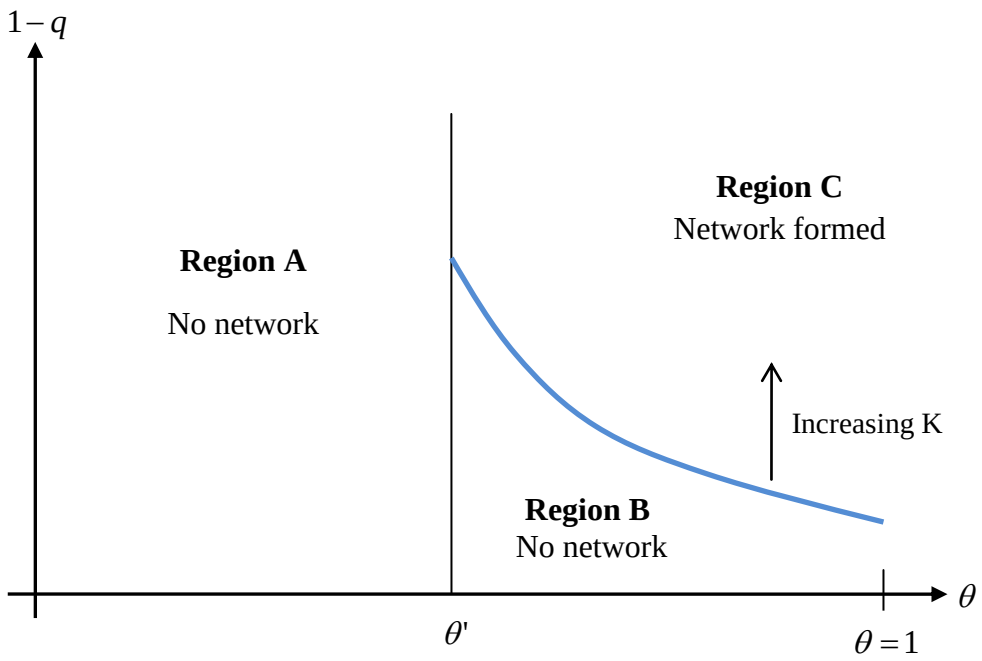
Therefore, the firms' network-forming decision is affected by a) the cost of forming the network, b) the level of empathy-enhancement in the bad economic state, and c) the probability of the bad state occurring.

Next, consider the case where $\theta < \theta'$. In this case, only firm B is able to obtain finance in the medium state, even if the network is formed. Thus it is trivial to note that each firm's dominant strategy is not to invest. Thus:

Proposition 2: *In the case that* $\theta < \theta'$, *only firm A can obtain bank finance, even if the network is formed. Therefore, the firms do not invest in the network in equilibrium {DI, DI}, regardless of the cost of forming the network* K, *the level of network empathy in the bad state* θ, *and the probability of the bad state* $(1-q)$.

I draw propositions 1 and 2 together in the following diagram.

Figure 4.1 Graphical Analysis of Propositions 1 and 2.



This diagram demonstrates the following. On the horizontal axis, I have the critical empathy parameter θ' (see equation 13) at which the bank switches from not lending to lending to firm B in the bad state of the economy. Thus, to the left of the vertical line (region A), the bank will not lend to firm B, even if the network forms. Therefore, the firms will not invest K in forming the network (thus, region A represents proposition 2).

To the right of the vertical line, if the firms have formed a network, the bank will lend to firm B in the bad state of the economy. Hence, regions B and C represent proposition 1. The downward sloping line represents the critical probability of the bad economy occurring, such that, if the actual bad-state probability is below (above) this critical level, the firms do not (do) form the network. Hence, region B represents proposition 1): b) and 1: c), while region C represents proposition 1: a).

I now consider the critical bad-state probability in more detail. From proposition 1, I note that this critical probability satisfies:

$$(1-q)'(\prod_B(b/\theta)) = K. \tag{14}$$

Therefore,

$$(1-q)' = \frac{K}{\prod_B(b/\theta)}. \tag{15}$$

Note that, as empathy increases, B's payoff increases, and, therefore, the critical bad-state probability decreases (as in the diagram). Furthermore, as the cost of forming the network increases, the critical bad-state probability increases (the upward shifts in the sloping line).

4.2.4 Equilibrium Payoffs and Welfare

In this section, I analyse the combined effects of network empathy, bad state probability, and network forming costs on the firms' equilibrium expected payoffs and welfare. In order to do so, I proceed using numerical examples to exemplify this analysis. I consider the following parameter values:

$$R_A = 800, \quad R_B = 500, \ \gamma_g = 7, \quad \gamma_b = 3, \quad I = 30, \ \theta \in [0,1]. \ \beta = 20{,}000.$$

I note that (given my parameter values) in the case of network formation in the bad state of the economy, the critical level of empathy (see equation 11) at which the bank will lend to firm B is $\theta' = 0.5$. This becomes the vertical line in the diagram.

I consider several possibilities for the probability of success and failure. That is, I consider:

$$q = 0,\ q = 0.25,\ q = 0.5,\ q = 0.75,\ q = 1.$$

Furthermore, I consider several levels of network-forming costs as follows:

$$K = 10,\ K = 20,\ K = 30,\ K = 40,\ K = 50.$$

In the appendix A at the end of this thesis, I consider these cases in detail. In this section of the chapter, it seems sufficient to consider the following. The equilibrium formation of the network is driven by firm B's expected payoff enhancement from forming the network, compared with the costs of forming the network (see propositions 1 and 2, and the diagram). Therefore, given the parameter values in this example, I obtain the following:

Table 4.2 Firm B's Payoff Gain from Network Formation:

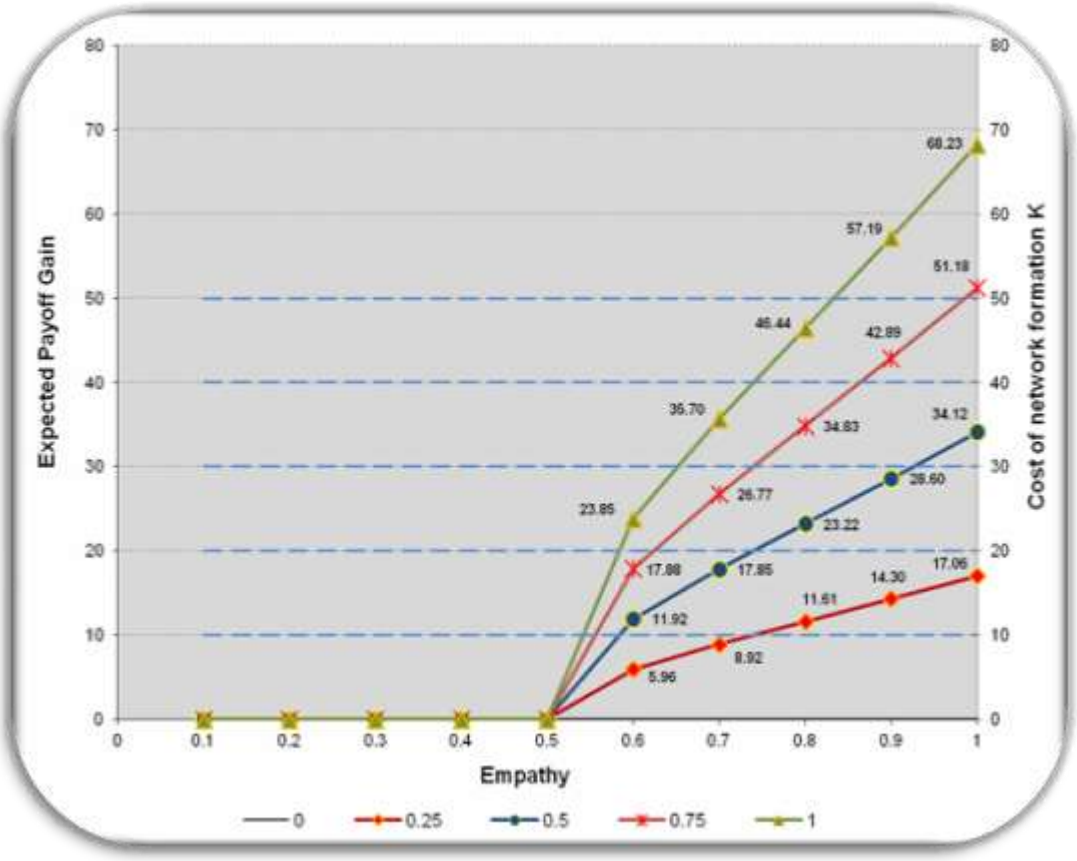
Empathy	*Bad Economic State probability* ***1 – q***				
	0	**0.25**	**0.5**	**0.75**	**1**
0.1	0	0	0	0	0
0.2	0	0	0	0	0
0.3	0	0	0	0	0
0.4	0	0	0	0	0
0.5	0	0	0	0	0
0.6	0	5.96	11.92	17.88	23.85
0.7	0	8.92	17.85	26.77	35.70
0.8	0	11.61	23.22	34.83	46.44
0.9	0	14.30	28.60	42.89	57.19
1	0	17.06	34.12	51.18	68.23

Note that, in all cases, forming the network provides no payoff-enhancement in the good state of the economy. Furthermore, for empathy values up to the critical empathy level $\theta' = 0.5,$ banks will not lend to firm B in the bad state, even if the network forms. Therefore, for this low interval of empathy, there is no enhancement to B's income, whether the network forms or not.

For empathy values greater than $\theta' = 0.5,$ banks will lend to both firms in the bad state in the case of network formation. Now, firm B's expected payoff enhancement from forming the network depends on the probability of the bad economic state occurring (since there is no payoff-enhancement from forming the network if the good economic state occurs). Thus, reading down the columns of the table (from the empathy level $\theta' = 0.5),$ firm B's expected payoff enhancement from network formation is increasing in the level of empathy. Reading across the table, its expected payoff enhancement is increasing in the probability of the bad state (forming the network as a protection against the bad economic state becomes more attractive as the probability of the bad state occurring increases).

Given the empathy level, and the probability of the good and bad states occurring, firm B makes its network-forming decision by comparing the expected payoff-enhancement levels in the table with its costs of forming the network. I consider this in the following diagram.

Figure 4.2. Firm B's Expected Payoff Gain from Forming Network at Cost ***K.***



The upward sloping lines represent firm B's payoff gain from forming the network (from *table 4.2*), which are increasing in empathy. The higher lines represent the higher probability of the bad economic state. Note that the lines begin at $\theta' = 0.5.$ This is because, to the left of $\theta' = 0.5,$ the bank is unwilling to lend to firm B in the bad economic state, and so network formation does not increase B's payoff.

The horizontal lines represent the cost K of forming the network. By considering the level of empathy, the level of cost, and the probability of the bad state, I can observe whether the network forms. For example, if the probability of the bad state is zero (the economy is good for sure), the 'payoff gain' line runs along the x-axis (there is no gain to firm B from forming the network: see *table 4.2*). Hence, the network will not form for any positive level of forming-cost.

If $\theta > 0.5,$ and if $K = 10,$ then, for bad state probability $q = 0.25,$ the network will not form for empathy levels between 0.5 and 0.75, but it will form for empathy levels beyond 0.75. However, if $K = 20,$ the network will not form for any empathy level if $q = 0.25.$

I leave the reader to consider firm B's network-forming decision for other combinations of empathy, bad state probability, and network- forming cost.

4.3 Welfare Effects and Policy Implications

Finally, I employ the numerical analysis provided to consider the combined effects of empathy, bad state probability, and network- forming cost on welfare. I define total welfare as the sum of the firms' and banks' expected payoffs:

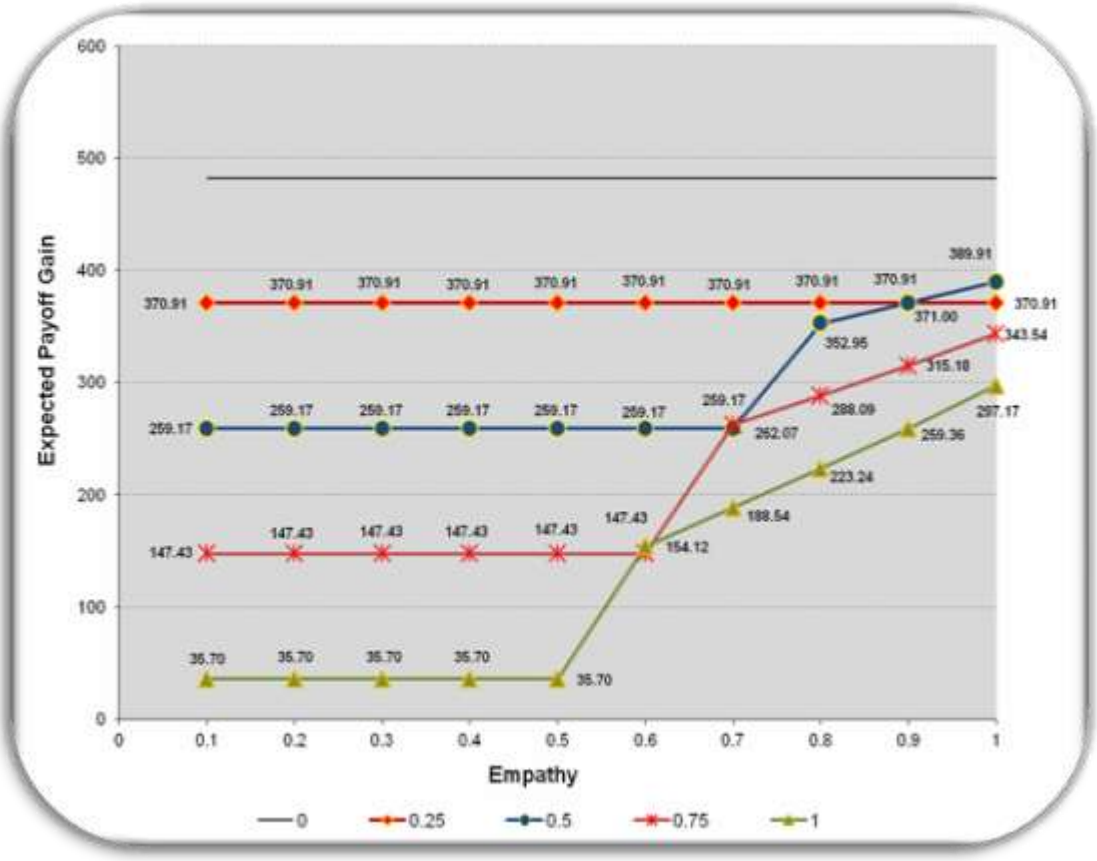
$$W = \prod_A + \prod_B + \pi_i + \pi_j = \prod_A + \prod_B$$

Noting that the competitive banks' payoffs are $\pi_i = \pi_j = 0,.$ welfare simplifies to the sum of firm A's and firm B's expected payoffs:

$$W = \prod_A + \prod_B .$$

I focus on the case where $K = 20$. Now, from my previous analysis of firm B's forming decision (and particularly analysing the previous graph), I am able to produce the following graph:

Figure 4.3 Network Formation, Empathy and Expected Welfare.



The highest line represents the case where the good state occurs for certain $(q = 1)$. Therefore, the network does not form. Lower lines represent decreasing probability of the good state, such that formation of the network becomes increasingly welfare-improving, and increasingly attractive to firm B. As the probability of the bad state increases, firm B forms the network at lower critical levels of empathy above 0.5, given B's forming costs $K = 20$. For example, the third line down represents $(q = 1 - q = 0.5)$. Due to B's forming costs, B only forms the network if $\theta \geq 0.7$. The line below that represents bad state probability $(1 - q = 0.75)$. Now, forming the

network adds more welfare, and is more attractive to B, so B forms the network for $\theta \geq 0.6$.

The lowest line represents $1-q=1$: the bad state occurs for sure. Now, forming the network increases welfare by the greatest amount, and is most attractive to firm B. Therefore, firm B now forms the network for $\theta \geq 0.5$.

The graph emphasises that expected welfare is greater for higher levels of the good state probability (naturally). As the good state probability reduces, the expected level of welfare reduces, but this is offset by formation of the network at higher levels of empathy. Thus, networks become more important in bleak economic conditions, providing the network is capable of creating the sufficient empathy required to offset the cost of empathy formation.

4.4 Conclusions and Final Remarks

I have investigated the general features of business networks, their practices and the factors promoting their formation. Bringing together this knowledge, I rationalised the main reasons for companies selecting to build a business network.

Inspired by the theoretical approach of Castañeda (2007), I developed this game-theoretic model to assess the interaction between empathy and economic gains under two possible economic scenarios, viz. good state of economy and bad state of economy. One can notice that Castañeda's (2007) model focuses on the positive side of network creation. Castañeda's (2007) model addressed BGs' positive side through analysing the effects of control rights; in other words, there would be a formation of business groups if control rights were high enough and the affiliated company was willing to surrender them.

In this model the positive side is investigated via the analysis of the behavioural and cultural aspect of empathy. The analysis of the negative nature of business network formation is, however, left for future research.

By elaborating this game-theoretic model, I focus this analysis on the interaction of empathy/trust versus economic gains under two possible economic scenarios (viz. good state of economy and bad state of economy).

I demonstrate that: (1) empathy 'generation' has a cost; (2) empathy enhances the payoff of affiliated companies; (3) there is a greater likelihood of networks forming when countries face a higher probability of economic turmoil; and (4) if the economy is in a good state, there is no payoff-enhancement from forming a network since firms are able to create high incomes.

I argue that the firms' network-forming decision is affected by: (1) the cost of forming the network; (2) the probability of the bad state occurring; and (3) the level of empathy-enhancement in the bad economic state. I also argue that there is a critical value where firms are unable to benefit from forming the network, as one of them will not be able to receive financing and so empathy will not be formed. Further, if this value is surpassed, the empathy cost is greater than the expected payoffs, leaving companies worse off when forming networks. However, when empathy is above this critical value, the probabilities of the good and bad states affect the payoff enhancements due to the network synergy. I note that as the probability of a good state of economy increases, the empathy enhancement reduces at each level of empathy. Thus, networks become less important as the probability of a good state of the economy increases.

These results support the view that business groups are structural organisations that can also help to ameliorate the inefficiencies in markets and institutions. These results agree with the findings of Castañeda's (2007) model regarding the preference of business groups to support the network by acting as *affiliated* companies instead of individual entities when a situation of financial disarray occurs. Additionally, from a political perspective, these findings also seem to backup the literature survey insights in relation to the origin and purpose of the Mexican business groups. As Khanna and Yafeh (2007) indicated, Mexican business groups arise in Mexico as a result of ISI policies, therefore the expected goal was to promote the growth of the Mexican economy.

This model investigates the positive side of business network creation via the analysis of the behavioural and cultural aspect of empathy. I would like to believe the development of this approach is the main contribution of this model, as the behavioural line of research is as yet incipient. Further, the survey of the Mexican business groups' features and practices may also provide new insights to the current literature.

With the analysis of the negative side of business groups in the previous chapter, both facets of business groups (the positive and the negative) have already been explored and theoretically modelled. Additionally, both chapters find evidence that Mexican business groups behave or have behaved both as detrimental and as welfare-enhancer agents. The empirical verification of what practice/behaviour is more common is addressed in the next chapter.

It is worth recalling that the model presented in this chapter has identified that one of the main conditions which will bring to the fore the positive side of BGs is the strong probability of economic turmoil. Because of this and since the data used for the empirical analysis does not include any period of financial crisis, I expect to find only evidence regarding the features of their organisational structure. For example, dispersion of cash-flow rights and voting rights; majority shareholders, high concentration of voting rights, and less than average (for emerging economies) levels of debt.

Chapter 5

Empirical Research: Determinants of Capital Structure of Mexican Publicly Traded Companies

The literature review chapter presented a comprehensive survey of the existing literature regarding ownership structure, capital structure, business networks and Mexico and its business legislation and best corporate governance practices. Chapter 3 investigated the main factors at work in the separation of the cash-flow rights and control rights in ownership structures in emerging economies; and how this separation affects the corporate financing decisions by developing a theoretical model. Chapter 4 assessed how the interaction between empathy/trust and economic gains influences companies to form a business group also by the elaboration of a game-theoretic model.

According to Castañeda Ramos (1999) large Mexican companies can be considered as business groups because they organise themselves into a business network or consortium that usually comprises a bank or other financial institution. Such networks have vertical and horizontal links and are owned and controlled by families or a closed group of investors. Although the efficiency of horizontal diversification could be arguable (see for example Jensen 1986), it seems that for the Mexican business groups, both horizontal and vertical links allowed them to take advantage of economies of scale or scope, to reduce transaction costs, to earn monopolistic profits and to diversify risk by undertaking production in different economic activities (Castañeda Ramos 1999).

This chapter builds on previous knowledge by empirically examining the capital structure of Mexican publicly traded companies. This chapter commences by investigating the applicability of two core capital structure models, viz. Rajan and Zingales' 1995 model and Booth *et al.*'s 2001 model, to the capital structure of Mexican companies. After testing for those key general well-known capital structure

determinants, I will attempt to make previous results more descriptive of capital structure of Mexican publicly traded companies by including the variables for consolidation and liquidity. Since this study analyses the effects of the capital structure determinants on debt levels, it is important to have a real individual measure of that matter (Rajan and Zingales, 1995). Finally, with the aim of providing a more complete account of the capital structure of Mexican publicly traded companies, this chapter concludes by analysing the interactions between market power and capital structure, and corporate ownership structure and capital structure.

To carry out this study, corporate financial data from the Mexican companies listed over the period 2000 to 2007 is used. Since the empirical work that has been carried out on emerging markets can be considered as incipient, a major contribution to this chapter is the study of Mexico, an emerging country that has only been superficially studied due to the scarcity of available information and the complexity of obtaining complete or 'sensitive[161]' corporate data.

The Mexican Stock Exchange (MSE or BMV by its Spanish acronym: Bolsa Mexicana de Valores[162]) could be considered as one of the smallest in the world because of the number of listed companies, which has not been larger than 260 since its second foundation[163]. Nonetheless, despite this small number of listed companies, the BMV was the second largest in Latin America and ranked among the top ten of the emerging markets in terms of market capitalisation (US $92bn), as of December 1998 (Heyman 1999). In addition, the Mexican stock market produced some of the highest returns in the world from 1976 to 1998. For example, '[t]*he price index (Índice de Precios y Cotizaciones -IPC) rose 28 times in dollar terms, i.e. at an annual average compound growth rate of 16.5%, compared to an equivalent rate for the* [Down Jones Industrial Average] *DJIA of 10.7% over the same period'* (Heyman 1999 p.167). Below, *Figure*

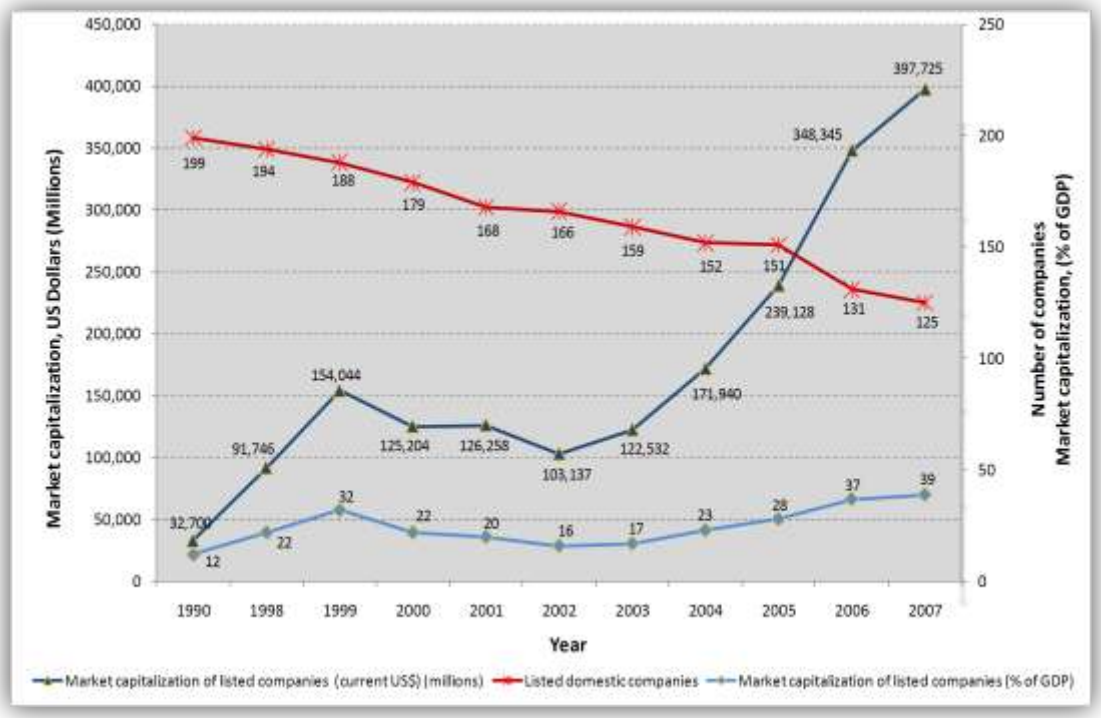
[161] By sensitive corporate data, this researcher meant the information that discloses a full picture of important corporate issues, practices or events. For example, all the types of stock issued by companies, including both the capital rights and the voting rights provided by each class of stock.

[162] The names Bolsa Mexicana de Valores (BMV) and Mexican Stock Exchange (MSE) are used interchangeably throughout the body of this thesis.

[163] According to the BMV (2010) and Heyman (1999), the first Stock Exchange in Mexico was founded in 1886 having a great reliance on mining companies. However, because of some operational issues and the worldwide mining crisis, this Stock Exchange had not recorded a single transaction by 1896, when it was forced to close (in April 1886). In 1907 a new Stock Exchange was formed, and it was not until 1975 that the first Securities Market Law (Ley del Mercado de Valores) was issued, acknowledging the importance of the securities market in the economic development of Mexico.

5.1 'Listed Companies and Market Capitalization of the Mexican Stock Market' presents more detailed information contrasting the total number of Mexican listed companies against the stock market capitalization, in US dollars and as a percentage of the Gross Domestic Product (GDP) of Mexico, over the period 1998 to 2007. These data may lead us to the conclusion that the Mexican listed companies could be experiencing a process of financial strengthening (sometimes reflected in their network or business-group affiliations) due to the fact that the number of listed companies keeps decreasing, but their participation in the GDP remains increasing.

Figure 5.1 Listed Companies and Market Capitalization of the Mexican Stock Market



Source, The World Bank.

The main contributions of this empirical chapter can be summarised as follows. Firstly, to draw a model depicting the capital structure of the Mexican publicly traded companies, as a result of: (1) documenting the extent of the applicability of some well-known determinants of the capital structure of developed markets (DMs), such as asset tangibility, company size, profitability and market to book ratio, to the corporate capital structure of Mexican publicly traded companies; and (2) testing the appropriateness of characteristic factors of emerging markets (EMs) like business risk

and effective tax rate to explain the corporate capital structure of these companies. Secondly, to explore the effects of the use of either individual accounts or consolidated accounting[164] as financial accounting report practices, on the financing policies of the Mexican publicly traded companies. Thirdly, to study the interplay between capital structure and product market according to the approach of corporate strategies including competitive behaviour. Fourthly, to investigate the interaction between the corporate capital structure and the ownership structure and control of the Mexican listed companies by analysing key characteristics like: type of majority owner (family owners or general public), issuance of financial instruments that allow the expropriation of voting rights dual-shares; separation of pecuniary rights and voting rights.

5.1 Theoretical Framework

Capital Structure is a very polemic and complex subject of corporate finance that has been intensively researched during the last decades. Broadly speaking, capital structure can be defined as the proportion of financing from debt and from equity capital. Its relevance might lie in the idea of being able to maximise the value of companies and/or to increase the wealth of its owners; this through the selection of the optimal corporate financing policies (Ross *et al*. 2007). Therefore, the main question driving the research in this field is whether it is possible to identify *'the optimal composition' of the company's capital* (i.e. a target level of debt under the Static Trade-Off theory or a preference source of financing under the Pecking Order theory) so that the value of the company and the investors' wealth will be maximised.

A revision of the empirical evidence on capital structure has shown that the corporate financial decisions have been based on some firm-characteristic factors which can, at the same time, be explained under diverse capital structure theories. This might be because of the overlap between the factors to be tested for each of the theories. However, the degree of applicability of some cross-sectional investigations in this field

[164] Consolidated accounting could be defined as the process *'...of adjusting and combining financial information from the individual financial statements of a parent undertaking and its subsidiary undertakings to prepare consolidated financial statements that present financial information for the group as a single economic entity'* (Bnet, 2010).

may be arguable due to their debatable econometric robustness. Consequently, it seems that the assessment of the predictions of each theory at a time may provide more accurate and solid results than the analysis of all the theories together.

Furthermore, this evidence also suggested that factors such as tax codes, bankruptcy codes, agency costs, asymmetry in the information and corporate governance[165], among others[166], are thought of as important determinants not only to the corporate capital structure in developed countries, but also to the capital structure of developing countries (e.g. Glen and Singh 2004 and Booth *et al*. 2001). As a matter of fact, it seemed that the effects exerted by country features and/or institutions on the capital structure of developing countries may outweigh the effects of the other determinants (e.g. Booth *et al.* 2001, Li *et al.* 2006, and Wiwattanakatang 1999).

Most of the empirical research has focussed on the features of developed countries. For instance, early empirical research was largely based on US data. Later, during the 1990s, it started to be complemented by data from a single developed country, and afterwards with evidence of small groups of developed countries[167]. Empirical research of emerging countries emerged over the last decade[168], whereas research on Latin America is even newer. So far, little research has been carried on Mexico maybe because this country has proved to be challenging in terms of data availability. Nevertheless, Castañeda Ramos (1999), Babatz Torres (1997), Husted and Serrano (2002) and Ruiz-Porras and Steinwascher (2007), have investigated the features of the capital structure and corporate governance practices in Mexico during the late 90s. Hence, my work can be considered as a development of the previous research. Moreover, this study may provide some avenues for further exploration because of its early stage of development.

5.1.1 Definition of the Variables

[165] This is with special emphasis on ownership structure and corporate control thereof.
[166] Please see Section 2.2.1 of the Literature Review Chapter for a brief explanation regarding Capital Structure.
[167] For instance, Rajan and Zingales 1995 and Wald 1999.
[168] Some investigations in this regard are: Booth *et al*. 2001, Glen and Singh 2004, Hagelin *et al*. 2006, Pandey 2001 and Wiwattanakatang 1999, among others.

The composition of each variable seems to be one of the main difficulties in every empirical investigation. Nonetheless, the attempt to find universal variables to carry out empirical research may weaken its validity since the variables ought to reflect the nature and purpose of the research in itself, as well as the particularities and the availability of the related data (e.g. country-specifics and firm-factors). For instance, in the case of capital structure research, it has been suggested that for examinations focused on agency problems of debt, a measure concerning the past corporate financing choices such as the ratio of debt to firm value may be appropriated. However, for other investigations related to transferring control issues under a financial distress scenario, a proxy embodying present cash-flows, e.g. interest coverage, should be more accurate (Rajan and Zingales 1995).

The variable composition problem thus is not an exception in any research on capital structure. Nevertheless, there are some well-known proxies suggested by previous investigations in this area. To follow, a brief summary of these is given.

Measures of Leverage

In its broadest meaning, leverage refers *'…to the extent to which a firm relies on debt'* as part of its financial policies (Ross *et. al*. 2008, p. 250). It could be said then that a proxy for leverage should reflect the effects of past financing decisions and *'…the relative claims on firm value held by equity and debt'* (Rajan and Zingales 1995, p. 1427).

Rajan and Zingales' study (1995) differentiated between three proxies for measuring leverage, which were *'stock' leverage, 'financial' leverage and leverage*. The '*stock' leverage* variable was estimated as the ratio between total liabilities and total assets. They suggested that this variable shows the amount of assets left for the shareholders after paying all the liabilities, but not the risk of the company going into bankruptcy. Further, this variable could overstate the amount of leverage when some of the accounts included in the liabilities group, e.g. payable accounts and pension liabilities, were used for transaction purposes rather than financing. The '*financial' leverage* variable, calculated as the ratio of total debt to total assets, possibly overcomes this flaw. However, it may fail to account for the fact that some asset accounts are offset by non-debt accounts. In other words, this proxy may exclude or ignore the effects of

trade credit practices, i.e. the level of accounts receivable and accounts payable, which could be a particular of the belonging sector/industry. Finally, the *leverage* variable computed as the ratio of total debt to net assets, where net assets were calculated as total assets minus account payables and other liabilities, could seem more accurate. Nonetheless, it could be argued that this proxy may still be affected by factors other than financing. A case in this point may be assets held against legal employment obligations or deferred taxes.

Booth *et al.*'s (2001) study estimated two different measures of leverage: total book-debt ratio and long-term debt ratio. *Total book-debt ratio* was the ratio of total liabilities divided by total liabilities plus net worth, while *long-term debt ratio* was the ratio of long-term liabilities divided by long-term liabilities plus net worth. The *long-term debt ratio* was also computed at market values, when possible, where net worth was substituted by average equity market value. In a slightly different way, Jung *et al*. (1999) and Hagelin *et al*. (2006) calculated leverage as the long-term debt divided by total assets.

Tangibility of Assets

The proportion of tangible assets in a company may proxy for both the agency costs and the probability of financial distress. Therefore, according to the view of the Static Trade-Off Model and the Agency-Cost framework, there may be two different reasons to expect a positive effect on the level of leverage as a result of a high proportion of tangible assets. Firstly, high proportions of tangible assets might enhance the corporate ability to issue secured debt (due to its collateral usage), while reducing the information revealed about future profits. Secondly, tangible assets may tend to retain more of their value in liquidation, which may encourage higher levels of debt. However, it has been proposed that a negative relationship could also be expected in companies having close relationships with their creditors (Berger and Undell 1995). The reasoning behind this is that these companies would probably need to provide lesser collateral for their debt than the collateral provided by companies without such ties. This is because creditors may perform a more informed monitoring, which may substitute for physical collateral.

Rajan and Zingales (1995) and Booth *et al.* (2001) calculated the tangibility of assets as the ratio of fixed assets to total asset.

Growth / Investment Opportunities

This variable could present either a positive or a negative correlation with leverage. Generally speaking, a negative correlation should be expected due to agency costs effects, whilst a positive relation may hold when considering information asymmetries. That is to say, both the agency costs of debt and the agency costs of equity may cause a negative correlation between growth opportunities and leverage, whereas the information asymmetry costs may produce a positive correlation.

In general, the agency costs of debt imply that levered companies may be unable to pursue the investment policy that would maximise the value of an all-equity firm because of the possibility of financial distress; whereas the agency costs of equity are mainly materialised into the managerial discretion costs, which may tempt managers to seek equity financing for unprofitable investment projects. Consequently, these two cases encourage low levels of debt financing. However, it is worth noting that when the management and the shareholder interests coincide, and the management purses growth objectives, external common equity would be valuable for companies with strong investment opportunities (see for example: Booth *et al*. 2001, Jung *et al*. 1996, Jensen and Meckling 1976, and Myers 1983).

On the other hand, when considering the informational costs from asymmetries, corporate financing options would follow the hierarchy established in the Pecking-Order Theory when there would be a certainty regarding the value of the corporate investment opportunities. Furthermore, in the case that equity is issued, that issuance would not be very informative of the value of the assets. In contrast, equity financing must not be an option if the investment opportunities were uncertain or worthless since these would increase the agency costs, which were considered to be smaller than the information asymmetry costs (Jung *et al*. 1996).

Rajan and Zingales (1995), Jung *et al*. (1996), Booth *et al*. (2001) and Hagelin *et al*. (2006) controlled for the corporate growth opportunities using the market-to-book variable. The first two researchers estimated this variable as the ratio of the market

value of assets to the book value of assets, while Booth *et al*. (2001) and Hagelin *et al*. (2006) calculated it as the equity market value divided by the net worth.

Firm Size

Booth *et al*. (2001) and Rajan and Zingales (1995) mentioned that the corporate size variable might proxy for factors such as survival, the agency costs of both debt and equity, and the information asymmetry costs. Hagelin *et al*. (2006) suggested that size may proxy for firm age. Therefore, assuming that the larger companies would be in a more stable productive stage and be more diversified, a positive relationship between the size of the company and its level of leverage should be expected. This is because it is less probable that these companies would go into bankruptcy. However, when considering that larger companies would have a better management, which may align shareholders and managers interests and improve the information disclosure policies, a negative correlation between firm size and leverage should be predicted since these companies may favour equity financing. Finally, presuming that size proxies for firm age, a negative relationship should be expected taking into account that older firms may have less dynamism.

The variable size has been estimated as the natural logarithm of net sales[169] (see for example: Rajan and Zingales 1995 and Booth *et al*. 2001), or as the natural logarithm of total assets (Hagelin *et al*. 2006).

Profitability

In most cases, a negative correlation between leverage and profitability should be predicted, although a positive relation may also be possible to find. For example, the Pecking-Order theory explains that because of information asymmetries, the market might interpret equity issuances as bad corporate news. Therefore, profitable companies must firstly exhaust their internal funds, and after look for secured external financing in an attempt to reduce the costs of informational asymmetries. Conversely, the cash-flow framework proposes that under an effective market for corporate control, profitable companies may be lead to use more debt financing. Further, debt-holders may be eager to lend money to companies with current cash-flows.

[169] Booth *et al*. (2001) calculated firm size as the natural logarithm of net sales and standardized it dividing it by 100.

Profitability has been calculated as the cash-flow from operations normalized by the book value of assets. See for example Rajan and Zingales (1995) and Booth *et al*. (2001). Hagelin *et al*. (2006) computed this as the return on capital employed.

Taxes

It has been argued that debt financing would be preferred over equity financing because of the gain generated from the deductibility of interest payments (tax-shields), as they are not taxed. Under this assertion, a positive correlation between leverage and taxes should be predicted, which is in line with the Static Trade-Off Model assumptions. Moreover, Rajan and Zingales (1995) identified that taxes (corporate taxes) in aggregate level might have some explanatory power when empirically tested for differences in capital structures, as long as personal taxes are also brought into the analysis. It is to be borne in mind that this explanatory power might be highly sensitive to the marginal tax rate of investors. Booth *et al*. (2001) commented on the difficulties of defining a tax variable for individual companies since the marginal value of the tax shield should be either zero or positive for all companies. They therefore suggested that an average tax rate may work better because it would include the impact of tax loss carry-forwards and the use of corporations as a conduit for income flows.

Jung *et al*. (1996) calculated taxes as tax payment divided by the book value of total assets for the year of the preceding issue, whilst Booth *et al*. (2001) estimated an average tax rate per country from income before taxes and income after taxes.

Business Risk

Business risk can be thought of as a variable for controlling the costs of financial distress. According to the view of both the Static Trade-Off Model and the Agency-Cost framework, business risk was expected to be negatively related to leverage as its increase might enhance the probability of financial distress. Booth *et al. (2001)* estimated the probability of financial distress as the variability of the return on assets over the available time period. A drawback to this proxy is that it was estimated as a single value for all years. In order to overcome this problem, Chang *et al*. (2009) used four different indicators as proxies of business risk, which were: the standard deviation of the percentage change in operating income (OI), the coefficient of variation of

return on assets (ROA), the coefficient of variation of return on equity (ROE), and the coefficient of variation of OI divided by total assets (TA).

Liquidity

Free cash flow can be understood as the cash flow *'... in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital'* (Jensen 1986 pp.2). Hagelin *et al*. (2006) controlled for the amount of free cash flow with the proxy liquidity, which was equal to current assets divided by current liabilities.

Consolidation

Consolidation of the financial statements might be an important factor to be accounted for in the analysis of the corporate financial policies. This is because companies reporting under unconsolidated or separate/individual financial statements may be able to look less levered than they would actually be[170]. *'Companies with unconsolidated balance sheets report an affiliate's net assets… as a long term investment on their balance sheets. Hence these firms would* [incorrectly] *appear to have lower leverage than otherwise identical firms who report consolidated balance sheets'* (Rajan and Zingales 1995, p. 1426).

To the best of my knowledge, the consolidation of the financial statements has not been included in any of the previous econometric models as a variable to be analysed. However, bearing in mind that its application may produce significant accounting and consequently financial differences, as previously explained, consolidation was included into the model as a binary variable which took zero as a value when the company accounts were not consolidated and one when they were.

5.2 Data and Sample Selection

Accounting and financial secondary data from the annual financial statements were employed to carry the empirical testing of the capital structure, which comprised the

[170] Note the implications for behavioural finance. In an efficient market investors might not be easily fooled.

first stage of this testing. These secondary data were collected from the financial statements and the corporate profile of every non-financial company listed in the Mexican Stock Exchange over the period 2000 to 2007 inclusive. Financial companies such as banks and insurance companies were eliminated from this sample because their business might bias the purpose of this investigation. As Rajan and Zingales (1995) pointed out, leverage practices of financial companies may actually be externally regulated (e.g. the minimum amount of capital required by the central bank to this type of companies in order to be allowed to operate). In addition, their debt-like liabilities may not be similar/comparable to the debt issued by non-financial companies.

The annual financial statements, which consisted of balance sheets, income statements and cash-flow statements were mainly retrieved from the ISI Emerging Markets database. The ISI Emerging Markets database was one of the most complete databases devoted to emerging markets providing access to *'hard-to-get'* accounting and market information of companies located in 80 different emerging markets[171] (ISI Emerging Markets 2009). A second source used to retrieve the annual financial statements was the Infosel Financiero[172] database. The market-stock price data was gathered either from the Infosel Financiero database or from the Annual Financial Facts and Figures Reports issued by the Mexican Stock Exchange (BMV) since the ISI Emerging Markets database failed to provide it. It is noteworthy to remember that accounting and financial information tend to vary between countries in both, content and frequency. This variance may be more noticeable between emerging countries since this information depends not only on the general accounting practices followed by each country, but also on their financial market regulations and their corporate governance practices. In the case of the Mexican companies, the earliest public

[171] According to the ISI Emerging Markets database, it provides information of almost 80 different emerging markets located in five continents that are Africa, Asia, Australia, Europe and Latin America. A list of the countries comprised, by continent, is as follow. From Africa: Bahrain, Egypt, Iran, Jordan, Kenya, Kuwait, Lebanon, Morocco, Nigeria, Saudi Arabia, South Africa, Sub-Saharan other, Tunisia, United Arab Emirates and MENA other countries. From Asia: Armenia, Azerbaijan, Cambodia, China, Hong-Kong, Georgia, India, Indonesia, Kazakhstan, Kyrgyzstan, Laos, Malaysia, Mongolia, The Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Tajikistan, Thailand, Turkmenistan, Uzbekistan, and Vietnam. Australia. From Europe: Albania, Belarus, Bosnia & Herzegovina, Bulgaria, Czech Republic, Croatia, Estonia, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey and Ukraine. Finally, from Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela and Central America. (ISI Emerging Markets 2009).

[172] Infosel Financiero is a Mexican database that provides most kinds of financial information in real-time, with a complete national and wide international coverage (Infosel 2009).

financial information corresponded to 1998, but this information was very scarce and only available for a few companies. Nevertheless, the public disclosure of corporate information has become a more regular practice for Mexican listed companies from 2000 onwards.

The sample size of this analysis comprised 624 observations, which were the result of 78 different companies observed during eight consecutive years, est. id from 2000 to 2007 inclusive. These 78 companies are shown below in *Table 5.1 'Sample Companies for the analysis of the Capital Structure Determinants',* which also presents their ticker and the sector to which they belong. The 624 observations were organised in a panel or longitudinal form to carry their statistical analysis. The sampling selection criterion applied was to include all non-financial companies listed in the BMV that had both their annual financial statements and their market stock price publicly available for the uninterrupted period of eight years running from 2000 to 2007. As of October 2007, 132 companies were listed in the BMV. Of these, 111 were non-financial companies and only 87 companies had their annual financial statements published throughout the eight-year period mentioned in either (or both) the ISI Emerging database or the Infosel Financiero database. Of those 87 companies, only 78 had at the same time the market price of their stock publicly available. Hence, the sample of this empirical investigation (denoted as the *'original sample'* henceforth) was formed by those 78 non-financial companies listed in the BMV that had both their accounting and financial information publicly available over the eight-year period running from 2000 to 2007, inclusive. However, it is important to mention that since one of these companies (TLEVISA) was a remarkable outlier, all the analyses performed in this section were carried under the following four scenarios: (1) with the row data and the *original sample*; (2) with the data transformed (e.g. some variables were converted to their natural logarithm in aid of controlling the outliers effects) and the original sample; (3) with the row data and the original sample apart from TLEVISA; and (4) the transformed data and the original sample apart from TLEVISA. All these four scenarios yielded similar results, maybe because there was only one potential outlier and the econometric software used (STATA) somehow resolved this issue by itself. Therefore, this researcher opted to discuss only the results obtained under the third scenario (row data and original sample excluding TLEVISA) because it was

considered the fairest approximation of the non-financial Mexican publicly traded companies at that time.

Table 5.1. Sample Companies for the analysis of the Capital Structure Determinants

This table presents the ticker, the company name and the sector of the 78 Mexican publicly traded companies listed in the Mexican Stock Exchange (BMV by its Spanish acronym) forming the sample for the capital structure testing. The denomination of the industrial sectors presented corresponds to the *'new scheme'* classification used by the BMV since March 2009. The different sectors used under this classification scheme are as follow; materials, industrials, consumer discretionary & services (CDS), consumer staples, health care and telecommunication services.

	TICKER	***NAME OF THE COMPANY***	***SECTOR***
1	**ACCELSA**	*ACCEL, S.A. DE C.V.*	Industrial
2	**ALFA**	*ALFA, S.A.B. DE C.V.*	Industrial
3	**ALSEA**	*ALSEA, S.A.B. DE C.V.*	CDS
4	**ARA**	*CONSORCIO ARA, S.A.B. DE C.V.*	Industrial
5	**ARISTOS**	*CONSORCIO ARISTOS, S.A.B. DE C.V.*	CDS
6	**ASUR**	*GRUPO AEROPORTUARIO DEL SURESTE, S.A.B. DE C.V.*	Industrial
7	**BACHOCO**	*INDUSTRIAS BACHOCO, S.A.B. DE C.V.*	Consumer Staples
8	**BAFAR**	*GRUPO BAFAR, S.A. DE C.V.*	Consumer Staples
9	***BEVIDES***	*FARMACIAS BENAVIDES, S.AB. DE .C.V.*	Health Care
10	**BIMBO**	*GRUPO BIMBO, S.A.B. DE C.V.*	Consumer Staples
11	**CEL**	*GRUPO IUSACELL, S.A. DE C.V.*	Telecom Services
12	**CEMEX**	*CEMEX, S.A.B. DE C.V.*	Materials
13	**CERAMIC**	*INTERNACIONAL DE CERAMICA, S.A. DE C.V.*	Industrial
14	**CIDMEGA**	*GRUPE, S.A.B. DE C.V.*	CDS
15	**CIE**	*CORPORACION INTERAMERICANA DE ENTRETENIMIENTO, S.A.B. DE C.V.*	CDS
16	**CMOCTEZ**	*CORPORACION MOCTEZUMA, S.A.B. DE C.V.*	Materials
17	***CMR***	*CMR, S.A.B. DE C.V.*	CDS
18	***CNCI***	*UNIVERSIDAD CNCI, S.A. DE C.V.*	CDS
19	**COLLADO**	*G COLLADO, S.A. DE C.V.*	Materials
20	***COMERCI***	*CONTROLADORA COMERCIAL MEXICANA, S.A.B. DE C.V.*	Consumer Staples
21	**CONTAL**	*GRUPO CONTINENTAL, S.A.B.*	Consumer Staples
22	**CONVER**	*CONVERTIDORA INDUSTRIAL, S.A.B. DE C.V.*	Materials
23	**CYDSASA**	*CYDSASA, S.A.B. DE C.V.*	Materials
24	**DERMET**	*DERMET DE MEXICO, S.A. DE C.V.*	Materials
25	**EDOARDO**	*EDOARDOS MARTIN, S.A.B. DE .CV.*	CDS
26	**EKCO**	*EKCO, S.A.B.*	CDS
27	**ELEKTRA**	*GRUPO ELEKTRA, S.A. DE C.V.*	CDS
28	**FEMSA**	*FOMENTO ECONOMICO MEXICANO, S.A.B. DE C.V.*	Consumer Staples
29	**FRAGUA**	*CORPORATIVO FRAGUA, S.A.B. DE C.V.*	Health Care
30	**GCARSO**	*GRUPO CARSO, S.A.B. DE C.V.*	Industrial
31	**GCC**	*GRUPO CEMENTOS DE CHIHUACHUA, S.A.B. DE C.V.*	Materials
32	**GCORVI**	*GRUPO CORVI, S.A.B. DE C.V.*	CDS

	TICKER	*NAME OF THE COMPANY*	*SECTOR*
33	**GEO**	*CORPORACION GEO, S.A.B. DE C.V.*	Industrial
34	**GEUPEC**	*GRUPO EMBOTELLADORAS UNIDAS, S.A.B. DE C.V.*	Consumer Staples
5	**GIGANTE**	*GRUPO GIGANTE, S.A.B. DE C.V.*	Consumer Staples
36	**GISSA**	*GRUPO INDUSTRIAL SALTILLO, S.A.B. DE C.V.*	Industrial
37	**GMACMA**	*GRUPO MACMA, S.A. DE C.V.*	Consumer Staples
38	**GMARTI**	*GRUPO MARTI, S.A.B.*	CDS
39	**GMD**	*GRUPO MEXICANO DE DESARROLLO, S.A.B.*	Industrial
40	**GMEXICO**	*GRUPO MEXICO, S.A.B. DE C.V.*	Materials
41	**GMODELO**	*GRUPO MODELO, S.A.B. DE C.V.*	Consumer Staples
42	***GMODERN***	*GRUPO LA MODERNA, S.A.B. DE .C.V.*	Consumer Staples
43	**GOMO**	*GRUPO COMERCIAL GOMO, S.A. DE C.V.*	CDS
44	**GPH**	*GRUPO PALACIO DE HIERRO, S.A. DE .C.V.*	CDS
45	**GRUMA**	*GRUMA, S.A.B. DE C.V.*	Consumer Staples
46	**HERDEZ**	*GRUPO HERDEZ, S.A.B. DE C.V.*	Consumer Staples
47	**HILASAL**	*HILASAL MEXICANA, S.A.B. DE C.V.*	CDS
48	**HOGAR**	*CONSORCIO HOGAR, S.A.B. DE C.V.*	Industrial
49	**IASASA**	*INDUSTRIA AUTOMOTRIZ, S.A. DE C.V.*	CDS
50	**ICA**	*EMPRESAS ICA, S.A.B. DE C.V.*	Industrial
51	**ICH**	*INDUSTRIAS CH, S.A.B. DE C.V.*	Materials
52	**KIMBER**	*KIMBERLY-CLARK DE MEXICO, S.A.B. DE C.V.*	Consumer Staples
53	**KOF**	*COCA-COLA FEMSA, S.A.B. DE C.V.*	Consumer Staples
54	**LAMOSA**	*GRUPO LAMOSA, S.A.B. DE C.V.*	Industrial
55	**LIVEPOL**	*EL PUERTO DE LIVERPOOL, S.A.B. DE C.V.*	CDS
56	**MASECA**	*GRUPO INDUSTRIAL MASECA, S.A.B. DE C.V.*	Consumer Staples
57	**MEDICA**	*MEDICA SUR, S.A. DE C.V.*	Health Care
58	***MEXCHEM***	*MEXICHEM, S.A.B. DE C.V.*	Materials
59	**MINSA**	*GRUPO MINSA, S.A. DE C.V.*	Consumer Staples
60	**NUTRISA**	*GRUPO NUTRISA, S.A. DE C.V.*	Consumer Staples
61	**PARRAS**	*COMPAÑIA INDUSTRIAL DE PARRAS, S.A. DE C.V.*	CDS
62	***PE&OLES***	*INDUSTRIAS PEÑOLES, S.A.B. DE C.V.*	Materials
63	**POSADAS**	*GRUPO POSADAS, S.A. DE C.V.*	CDS
64	**QUMMA**	*GRUPO QUMMA, S.A. DE C.V.*	Telecom Services
65	**RCENTRO**	*GRUPO RADIO CENTRO, S.A.B. DE C.V.*	Telecom Services
66	***SAB***	*GRUPO CASA SABA, S.A.B. DE C.V.*	Health Care
67	**SANLUIS**	*SANLUIS CORPORACION, S.A. DE C.V.*	CDS
68	**SIMEC**	*GRUPO SIMEC, S.A.B. DE C.V.*	Materials
69	**SORIANA**	*ORGANIZACION SORIANA, S.A.B. DE C.V.*	Consumer Staples
70	**TEKCHEM**	*TEKCHEM, S.A.B. DE C.V.*	Materials
71	**TELECOM**	*CARSO GLOBAL TELECOM, S.A.B. DE C.V.*	Telecom Services
72	**TELMEX**	*TELEFONOS DE MEXICO, S.A.B. DE C.V.*	Telecom Services
73	**TLEVISA**	*GRUPO TELEVISA, S.A.*	Telecom Services
74	**TMM**	*GRUPO TMM, S.A.*	Industrial
75	**TVAZTCA**	*TV AZTECA, S.A. DE C.V.*	Telecom Services
76	**VALLE**	*JUGOS DEL VALLE, S.A.B. DE C.V.*	Consumer Staples
77	**VITRO**	*VITRO, S.A.B. DE C.V.*	Materials
78	**WALMEX**	*WAL-MART DE MEXICO, S.A.B. DE C.V.*	Consumer Staples

Source, Bolsa Mexicana de Valores (BMV), as of March 2009.

The idea to analyse listed companies aimed at reaching the largest possible sample with quality accounting and financial information available. Further, the achieved sample seemed to provide a reasonable picture of the Mexican companies listed in the BMV over the period 2000 to 2007 as it captured about 60 percent of the total listed companies or 71 percent when the companies from the financial sector were excluded. Further, this sample technically comprised companies from six out of the seven active sectors[173], which accounted the financial sector as an active sector. The representation of each sector (as a percentage) ranged from the lowest 50 percent corresponding to the industrial sector to the highest 100 percent to the health care sector.

Since March 2009, the BMV has employed a new scheme for the sector classification of the companies listed there. This new classification scheme –which followed two well-known international industry classification systems named the Global Industry Classification Standard (GICS)[174] and the Industry Classification Benchmark (ICB)[175]– consists of four different levels. The levels correspond to ten different sectors, 24 sub-sectors, 77 business lines, and 186 sub-business lines. The allocation of a company to a specific sector, subsector, business line and sub-business line depended mainly on the main source of its revenues. The ten different sectors comprised by this new classification scheme were: energy, materials, industrials, consumer discretionary and services (cds), consumer staples (cs), health care, financial services, information technology, telecommunication services, and utilities. From these ten sectors, seven were active since the energy sector, the utilities sector and the information technology sector had no companies listed at the time of this research. The percentage of representation per sector ranged from a minimum of 50% corresponding to the industrial sector, to a maximum of 100% corresponding to the health care sector, achieving an overall coverage of 70.91%. The telecommunications services sector had

[173] There were four sectors not represented in this sample, one active (with companies listed) and three with no companies listed under them. The active sector not represented was the financial sector, which was excluded because of its business nature, which may introduce some flaws into the analysis if it were included. The other three sectors not included because they did not have any company actively listed were: energy, information technology and utilities.

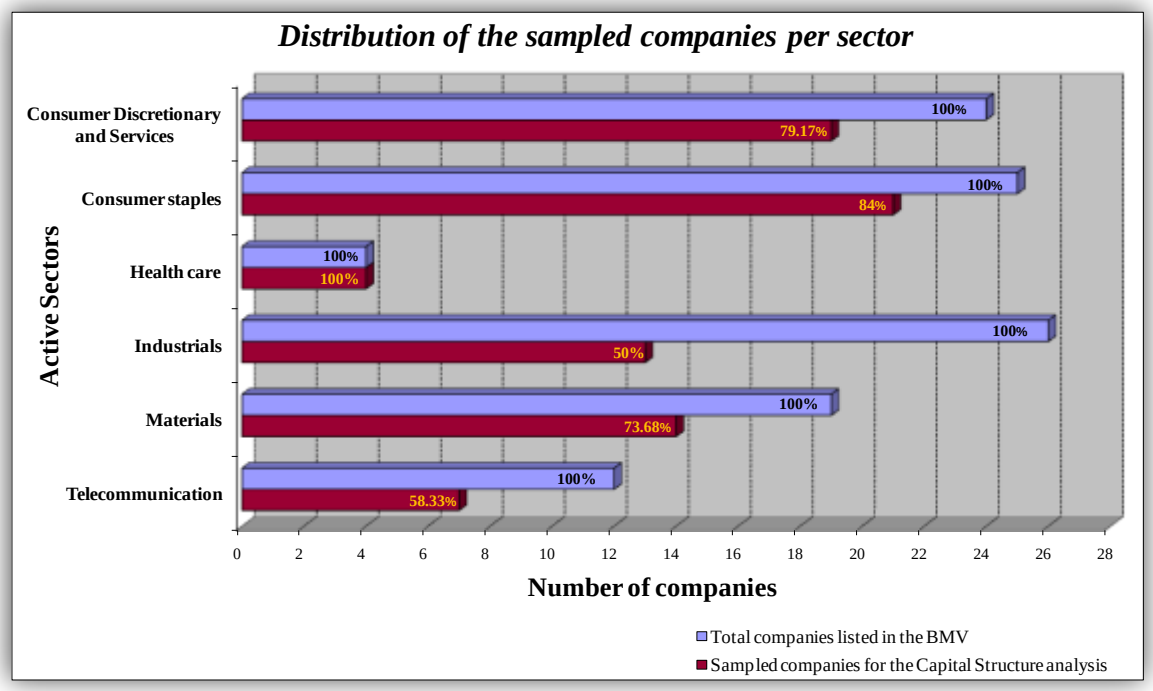
[174] The Global Industry Classification Standard (GICS) system was jointly developed by Morgan Stanley Capital International (MSCI) and Standard & Poor's (S&P) in 1999 (MCSI Barra, 2009). As of May 2009, the GICS structure comprised ten different sectors, 24 industry groups, 68 industries and 154 sub-industries.

[175] The Industry Classification Benchmark (ICB) was developed in 2005 by Dow Jones Indexes and FTSE Group. This classification system is categorised into four levels, which are: industry, super-sector, sector and sub-sector. As of May 2009, the ICB comprises ten industries, 19 super-sectors, 41 sectors and 114 sub-sectors (ICB 2009).

a contribution of 58%; whereas the consumer staples sector reached 84 percent. The population of these sectors, excluding the health care sector[176], fluctuated between 12 to 26 companies, with an average of 21 companies. *Figure 5.2 Distribution of the sampled companies per sector'* below plots the total companies listed in the BMV, as of March 2009, and the companies included in this sample, showing their relative percentage of contribution per sector.

Figure 5.2 Distribution of the sampled companies per sector

This graph contrasts the total companies listed in the Mexican Stock Exchange as of March 2009, with the companies forming the sample of this investigation distributed by sector. This comparison (presented in both, number of companies and percentage) evidences that a fair representation of the universe of Mexican listed companies at that date was achieved since each active sector has a substantial participation in the sample.



[176] The health care sector was composed of four companies and all of them were part of this sample.

Finally, 24 from these 78 companies were deemed highly-traded companies, and therefore, they were part of the sample of the Price and Quotation Index[177] (IPC) of the BMV valid from February 2006 to January 2007 (Bolsa Mexicana de Valores, 2006).

5.3 Empirical Testing

In order to explore the extent of the applicability of the main determinants of the capital structure of both developed markets (DMs) and emerging markets (EMs) with those of the capital structure of the Mexican publicly traded companies, the frameworks of Rajan and Zingales (1995) and Booth *et al*. (2001) were developed first by using financial information from the 78 Mexican listed companies depicted in Table 1 over an eight-year period running from 2000 to 2007. Their findings were compared with the results from my research work. After this point, Booth *et al*. model's was replicated and two more variables were included into it namely, liquidity and consolidation, which this researcher believes might capture important behaviour related to the financing policies of the Mexican publicly traded companies.

As a contribution to this investigation, the empirical testing of the capital structure of the Mexican publicly traded companies has been carried out using three different measures of debt (est. i.e. total debt, long-term debt and short-term debt) measured at both book and market values. The main reason for using these three different measures of debt is to have a better understanding of the corporate capital structure of the Mexican publicly companies. It also makes it possible to test the argument regarding emerging markets being more prone to reflect the effects of the financing policies of their companies in the short term.

As was explained earlier, the discussion of the results corresponds to the statistical analysis of the un-transformed data of 77 companies (TLEVISA excluded) over the eight-year period.

[177] The Price and Quotation Index (IPC) is the main indicator of the overall performance of the Mexican Stock Exchange (MSE). Its sample is calculated of a balanced weighted selection of 35 shares representative of all the shares listed on the MSE from various sectors across the economy, and is revised twice a year. Weight is determined by market capitalization. (Wikipedia 2010).

5.3.1 General Determinants of the Capital Structure

5.3.1.1The Rajan-Zingales (1995) Framework

Unlike previous studies, Rajan and Zingales' investigation (1995) found that the level of leverage **(adjusted debt to adjusted capital)** across the G-7[178] countries was very similar (ranging from 33% to 39% at book values, whereas from 17% to 36% at market values), with only the United Kingdom and Germany being relatively less levered with medians of 16% and 18% at book values and 11% and 15% at market values, respectively. Furthermore, they showed that four company features namely tangibility of assets, the market-to-book ratio, firm size, and profitability (measured as the return on assets -ROA-) acted as important determinants of the corporate capital structure across the G-7 countries.

By running diverse within-regressions between leverage and the four company factors mentioned previously as four-year average (1987-1990) regressors, Rajan and Zingales (1995) found that these factors were similarly correlated with leverage across the G-7 countries. In other words, tangibility and size[179] were, in general, positively correlated to leverage, whereas market-to-book ratio and profitability were negatively correlated. The sign and significance of their findings can be observed below in *Table 5.2 ' Sign and Significance of the Capital Structure determinants'.*

Finally, Rajan and Zingales (1995) stressed the fact that their findings might not be considered as a spurious outcome result of the covered sample[180] or the used data since they transformed the data by recording some accounting adjustments[181] in order to make it comparable across the seven countries.

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[178] The countries forming the G-7 are: Canada, France, Germany, Italy, Japan, The United States of America and The United Kingdom.

[179] Except for Germany and France which presented a negative correlation to leverage when measured at market values

[180] Their final sample covered between 30 and 70 percent of the companies listed in every country, representing more than 50 percent of the market capitalization in each country.

[181] Rajan and Zingales carried the following four accounting adjustments to the accounting data of the G-7 countries (except the United States of America (USA)) in order to make all the accounting data comparable across the seven countries.

(1) Cash and short-term investments were offset by an equivalent amount of debt and removed from the balance sheet. This was because they were considered and treated as excess liquidity.

(2) The value of intangible assets was subtracted from the book value of equity and from the assets accordingly. This was done as a result of the likelihood that the value of U.S.A. assets may be overstated with respect to the other countries because of the wave of acquisitions of the 1980s.

(3) A large fraction of liabilities were reclassified as shareholders' equity since it could be argued that a large fraction of German liabilities were composed of dubious provisions for future liabilities, which were rather equity.

(4) Deferred taxes were added to the book value of equity since they were considered as a component of shareholders' equity.

Table 5.2. Sign and Significance of the Capital Structure determinants

This table contrasts the sign and significance of the Capital Structure determinants (independent variables) found by Rajan and Zingales (1995) for the G-7 countries with the sign and significance of these determinants for Mexico. ***Section A*** displays the results of the regressions when leverage is measured at **book values.** ***Section B*** presents the results from the regressions when leverage is at **market values**. *Panel A* depicts the results of each of the G-7 countries. Panel B presents the results of Mexico after running a panel liner regression using three different methods: Pooled Ordinary Least Square (OLS), Random-Effects (RE) and Fixed-Effects (FE) methods. The first column of Panel B displays the outputs using pooled OLS in order for the results of this investigation to be comparable with those from Rajan-Zingales (1995) framework. The second column shows the results from the random effects method *(RE)* and fixed effects method *(FE)* for book and market values, respectively.

The capital structure determinants are computed as follows: tangibility is the ratio of fixed assets to the book value of total assets; market-to-book is the ratio of the book value of assets less the book value of equity plus the market value of equity all divided by the book value of assets; size is the natural logarithm of net sales; and profitability to is the earnings before interest and taxes (EBIT) divided by book value of assets or return on assets (ROA). Rajan and Zingales' findings are result from a four-year period (1987 to 1990), whereas Mexico results comprise an eight-year period (2000 to 2007) data.

		Panel A							*Panel B*	
		United States	**Japan**	**Germany**	**France**	**Italy**	**United Kingdom**	**Canada**	**OLS MEXICO**	**RE & FE MEXICO**
Section A	**Tangibility**	*** +	*** +	** +	** +	+	*** +	*** +	** -	-
	Market-to-book	*** -	-	*** -	** -	-	*** -	*** -	*** +	*** +
	Size	*** +	*** +	*** -	+	+	*** +	*** +	*** +	** +
	ROA	*** -	*** -	+	-	-	-	*** -	*** -	*** -
Section B	**Tangibility**	*** +	*** +	* +	+	** +	*** +	+	+	+
	Market-to-book	*** -	*** -	*** -	** -	* -	** -	*** -	*** -	*** -
	Size	*** +	*** +	*** -	-	+	+	*** +	+	* -
	ROA	*** -	*** -	+	-	-	** -	*** -	*** -	*** -

, **, and *, significant at 10, 5 and 1 percent level, respectively*

For the sake of comparison, the first three of the four accounting adjustments carried out by Rajan and Zingales (1995) were computed into the accounting information of the 78 Mexican listed companies included in the original sample. The accounting adjustment about deferred taxes was not applied to avoid a possible duplication of effect as the Mexican accounting principles had some explicit provisions in this regard.

After computing these adjustments, Rajan and Zingales' (1995) work was replicated as a general pooled model with cluster-robust standard errors. This was done firstly without controlling for industry effects and later controlling for these effects using dummy variables. The main assumption of a pooled model is that the regressors are exogenous. In other words, it assumes that the average values of the variables and the relationships between them are constant over time and across all of the cross-sectional units in the sample (Brooks 2008).

Rajan and Zingales' model, thus could be represented as follows,

$$leverage_{it} = \alpha + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ mk-bk ratio}_{it} + u_{it} \quad \text{.....models (1) and (5)}$$

where *leverage* is any of the two ratios (total book-debt or total market debt) for the firm *i* at time *t*. *Letting γ denote the sum of all the dummy variables controlling for the industry sectors, the previous model can be re-written as:*

$$leverage_{it} = \alpha + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ mk-bk ratio}_{it} + \Sigma \gamma \text{ dummy sectors}_{it} + u_{it} \quad \text{.....models (3) and (7)}$$

However, some of the flaws of pooled models may be overcome by using either of the two broadest classes of panel estimators approaches, namely fixed effects (FE) models or random effects (RE) models. FE models and RE models decompose the error term (u_{it}) into the individual-level effects (α_i) and the idiosyncratic error (ε_{it}). In the simplest form, both approaches (FE and RE models) propose different intercept terms for each cross-sectional unit, with the relationships between the explanatory and explained variables assumed to be the same both cross-sectionally and temporally. An important difference between these two approaches may be the fact that under the RE model, the intercepts for each cross-sectional unit are assumed to arise from a common intercept

(α) that is the same for all cross-sectional units and over time, plus a random variable that accounts for the unobserved effects being independent of the observed variables. That is to say, in both types of models (FE and RE) the individual-level effects (α_i) are random. However, in FE models the α_i are permitted to be correlated with the regressors, allowing a limited form of endogeneity. In contrast, in RE models it is assumed that the α_i is purely random, which implies that α_i is uncorrelated with the regressors (Brooks 2008 and Colin, Cameron and Trivedi 2009)

To determine whether a FE model or a RE model is most appropriate for modelling this theoretical conceptualisation, the Hausman test and the Hausman and Sigmamore[182] test are carried out. The Hausman, and Hausman and Sigmamore tests, which have as null hypothesis that a RE estimator is fully efficient (e.g. individual effects are random), indicated in this case that RE are consistent and efficient for leverage measured at book values. However, FE are more suitable for leverage at market values since random effects are efficient but inconsistent. These models were applied to both cases, that is when the regression is run without controlling for industry effects and when it controls for the industry effects.

Secondly, the model is also replicated as a panel regression with fixed effects (FE) and with random effects (RE). This is done firstly without controlling for industry effects and later, controlling for these effects using dummy variables as previously done.

Under FE and RE, Rajan and Zingales' model could be mathematically expressed as:

$$leverage_{it} = \alpha_i + \beta_1 \text{tangibility}_{it} + \beta_2 \text{size}_{it} + \beta_3 \text{roa}_{it} + \beta_4 \text{market-book ratio}_{it} + \varepsilon_{it} \quad \text{.....models (2) and (6)}$$

where *leverage* is any of the two ratios (total book-debt or total market debt) for the firm *i* at time *t.* *Letting γ denote the sum of all the dummy variables controlling for the industry sectors, the previous model can be re-written as:*

[182] According to Colin Cameron and Trivedi (2009) the Hausman and Sigmamore test might be considered as a robust version of the Hausman test because the former specifies that the covariance matrices of both regressions (FE and RE) are based on the same estimated disturbance variance from the efficient estimator.

$$leverage_{it} = \alpha_i + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ market-book ratio}_{it} + \Sigma \gamma \text{ dummy sectors}_{it} + \varepsilon_{it} \text{.....models (4) and (8)}$$

In general, as *Table 5.2. 'Sign and Significance of the Capital Structure determinants'* and

Table 5.3 *'Regression Results*.' show, three out of those four company factors named: size, profitability (measured as ROA) and market-to-book ratio, are highly-significantly correlated to leverage at both book and market values. However, tangibility is only significantly correlated to leverage when leverage is measured at book values and the model is run as a pooled regression with robust errors for clusters. Further, profitability is the only determinant that keeps its negative sign and its highly correlated coefficient under both types of leverage (viz. book leverage and market leverage). In contrast, size and market-to-book ratio shows a positive correlation at book values, but a negative correlation at market values.

Table 5.3 Regression Results –Rajan-Zingales (1995) Framework–

This table presents the regression results between the four company factors proposed by Rajan and Zingales (1995) and leverage measured at book values (panel A) and market values (panel B). The dependent variable is leverage which is adjusted debt to adjusted debt plus book or market value (respectively) of adjusted equity. The four regressors are as follows: tangibility is the ratio of fixed assets to the book value of total assets; market-to-book is the ratio of the book value of assets less the book value of equity plus the market value of equity all divided by the book value of assets; size is the natural logarithm of net sales; and profitability to is the earnings before interest and taxes (EBIT) divided by book value of assets or return on assets (ROA). All the variables (regressand and regressors) correspond to the period 2000 to 2007. Standard errors are presented in parenthesis.

The estimated models are as follows,

$$leverage_{it} = \alpha + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ mk-bk ratio}_{it} + u_{it} \text{..... models (1) and (5)}$$

$$leverage_{it} = \alpha + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ mk-bk ratio}_{it} + \Sigma \gamma \text{ dummy sectors}_{it} + u_{it} \text{..models (3) \& (7)}$$

$$leverage_{it} = \alpha_i + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ mk-bk ratio}_{it} + \varepsilon_{it} \text{..... models (2) and (6)}$$

$$leverage_{it} = \alpha_i + \beta_1 \text{ tangibility}_{it} + \beta_2 \text{ size}_{it} + \beta_3 \text{ roa}_{it} + \beta_4 \text{ mk-bk ratio}_{it} + \Sigma \gamma \text{ dummy sectors}_{it} + \varepsilon_{it} \text{...models (4) \& (8)}$$

	Panel A				Panel B			
	Book leverage				*Market leverage*			
	OLS rob	**RE**	**OLS rob**	**RE**	**OLS rob**	**FE**	**OLS rob**	**FE**
tangibility	**-0.1773****	-0.0312	**-0.1678****	-0.0319	-0.0357	0.0485	-0.0256	0.0485
	(0.0858)	(0.0408)	(0.0842)	(0.0407)	(0.0810)	(0.0416)	(0.0832)	(0.0416)
size	**0.0295***	**0.0200***	**0.0369*****	**0.0245****	0.0056	**-0.0273***	0.0099	**-0.0273***
	(0.0151)	(0.0103)	(0.0126)	(0.0102)	(0.0146)	(0.0140)	(0.0124)	(0.0140)
ROA	**-1.1991*****	**-0.8947*****	**-1.1922*****	**-0.9059*****	**-1.2540*****	**-0.7554*****	**-1.2458*****	**-0.7554*****
	(0.3115)	(0.1098)	(0.2648)	(0.1092)	(0.2155)	(0.1097)	(0.2277)	(0.1097)
mk-bk ratio	**0.0731****	**0.0386*****	**0.0645*****	**0.0370*****	**-0.0896*****	**-0.1115*****	**-0.0918*****	**-0.1115*****
	(0.0293)	(0.0107)	(0.0182)	(0.0107)	(0.0277)	(0.0111)	(0.0293)	(0.0111)
consumer disc serv			**0.1299****	**0.1218****			**0.0988***	0.0000
			(0.0568)	(0.0612)			(0.0509)	(0.0000)
health care			**0.1198***	0.1305			0.0637	0.0000
			(0.0628)	(0.1019)			(0.0506)	(0.0000)
industrial			0.0742	0.0792			**0.0984***	0.0000
			(0.0669)	(0.0663)			(0.0566)	(0.0000)
material			**0.1220***	**0.1128***			**0.1350****	0.0000
			(0.0643)	(0.0644)			(0.0546)	(0.0000)
telecomm			**0.3381*****	**0.3446*****			**0.2472*****	0.0000
			(0.0706)	(0.0862)			(0.0593)	(0.0000)
_cons	0.1494	0.2221	-0.0586	0.0600	**0.6384*****	**1.0722*****	**0.4798*****	**1.0722*****
	(0.2203)	(0.1577)	(0.1844)	(0.1668)	(0.2093)	(0.2131)	(0.1797)	(0.2131)
N	616	616	616	616	616	616	616	616
r^2	0.1929		0.3084		0.4482	0.3321	0.5092	0.3321
r^2_o		0.1699		0.2809		0.3987		0.3987
r^2_b		0.2073		0.3401		0.4218		0.4218
sigma_u		0.1941		0.1798		0.1824		0.1824
sigma_e		0.1242		0.1242		0.1178		0.1178
rho		0.7095		0.6769		0.7057		0.7057
theta		0.7794		0.7627				

Standard errors in parentheses

**** p<0.10*** ***** p<0.05*** ****** p<0.01***

It seems remarkable that the sign of these two factors (size and market-to-book ratio) is not the one theoretically expected when compared with Rajan and Zingales' (1995) general findings, although size yields similar results to that displayed by Germany. Nevertheless, as noted by these researchers and by Booth *et al*. (2001) among others, it is important to bear in mind that country specifics such as the macro-economic environment (e.g. level of economic development) and corporate governance practices

(such as data availability and the market for corporate control) may outweigh the effects of the company factors tested.

> [The understanding of] '*...between-country differences and the review of institutions is important because they may affect the within-country cross-sectional correlation between leverage and factors such as firm profitability and firm size. This may help us identify the true economic forces underlying factors.'* (Rajan and Zingales 1995, p. 1422)

For example, it could be possible that when leverage is measured at book values, size may be an inverse proxy for the expected costs of bankruptcy. This may imply that larger companies may issue higher levels because of their lower probability of default. However, when size was correlated to leverage measured at market values, it could be that due to some corporate governance effects (such as information disclosure) picked by this proxy, the issuance of equity, rather than debt, may be favoured for bigger companies. In the case of the market-to-book ratio, one may expect -from a theoretical stand- a negative correlation between this factor and leverage. This may be either because of the cost of financial distress (proxy for the underinvestment costs associated with high leverage) or because of the effects of attempting to time the market by issuing equity when the company value (market-to-book ratio) is perceived to be high. The positive correlation find at book values could respond to the fact that bank financing is not widely open in Mexico[183], so only a few companies (the biggest ones) may have access to this kind of financing. In contrast, when leverage is measured at market values, companies may be more interested in the advantages of timing the market than the benefits from raising debt comprise.

After having verified that at least three of the four company factors (e.g. size, profitability and market-to-book ratio) suggested by Rajan and Zingales (1995), as key determinants of the capital structure in DMs, also work as important determinants for the corporate capital structure of the Mexican listed companies, the company factors proposed by Booth *et al*. (2001) are assessed in order to test if they might also work as key determinants of the capital structure of the Mexican publicly traded companies.

[183] The time scope of the macro-economic analysis of Mexico is based on the eight-year period 2000 to 2007, which is the time of the financial data employed in this empirical analysis.

5.3.1.2 The Booth et al. (2001) Framework

Booth et al. (2001) were one of the pioneer researchers to seek to establish whether capital structure theory was portable across developing countries using a sample formed by ten developing countries[184], Mexico being one of them, over a period of 11 years (1980 to 1990) when data was available. One of the driving ideas behind this study was that the institutional structures per country could have an important effect on the already well-known capital structure determinants. For this reason, Booth *et al*. (2001) extended Rajan and Zingales' (1995) model by including a tax rate and a business risk variable. Booth *et al.*'s (2001) findings suggested that the capital structure of developing countries was determined by the same stylised company factors existing in developed countries. However, their results showed persistent differences across countries, indicating that specific country factors were also at work. In other words, Booth *et al.*'s (2001) results documented that not only are corporate size, asset tangibility, profitability (ROA) and the market-to-book ratio significantly correlated with debt when calculated as total book-debt and long-term debt at book and markets values, but so are business risk and tax rate.

It is of note that although the evidence was mixed, since approximately a half of the sampled countries showed one sign, and the other half the opposite one, profitability and the market-to-book ratio exhibited very peculiar behaviour. On the one hand, profitability was the only variable that exhibited the same sign (negative) in all the countries apart from Zimbabwe. However, the market-to-book ratio yielded the opposite from that theoretically expected (i.e. positive) in six of the seven countries that had the data available to be included in the regression analysis. These results seemed to highlight the importance of the agency and information asymmetry problems in emerging countries, as well as a low level of development in their bond-market.

Table 5.4 'Sign and Significance of the Capital Structure determinants' below contrasts the signs and significant of the coefficients of the regression analysis performed by Booth *et al*. in 2001(section A) with the signs and significant of the

[184] The ten countries forming this sample were: Brazil, India, Jordan, Korea, Malaysia, Mexico, Pakistan, Thailand, Turkey and Zimbabwe.

coefficients obtained from replicating Booth *et al.*'s methodology with data of the Mexican publicly traded companies (section B).

Table 5.4 Sign and Significance of the Capital Structure determinants

This table displays the sign and significance of the Capital Structure determinants proposed by Booth et al. in 2001 when correlated with each of the three different measures of leverage: (1) total book-debt (TB), (2) long-term book debt (LT-B) and (3) long-term market-debt (LT-M) using a fixed-effects (FE) estimator. The sign and significance of these determinants when replicated using data of Mexico from 2000 to 2007 are displayed in Section B of this Table. For the sake of the comparison between Booth et al.'s findings and this researcher's results, the third row of Section A and the second row of Section B discloses Mexico results when running a panel pooled regression (OLS) (Booth et al. results and this researcher's results, respectively) while the second row of Section A and the first row of Section B presents Mexico results from running a panel regression with FE.

The capital structure variables (regressors) are calculated as follows: tangibility is the ratio of total assets minus current assets divided by total assets; market-to-book is the equity market value divided by net worth; size is the natural logarithm of sales divided by 100; profitability is the earnings before interests and taxes (EBIT) divided by total assets; tax rate is the percentage from earnings before and earnings after tax; while business risk is the variability of return on assets. The business risk column does not present results for any country apart from Mexico, ols since the FE model eliminates this variable for remaining constant through all the period.

		size			**tangibility**			**ROA**			**risk**			**market-book-ratio**			**tax rate**		
		T-B	LT-B	LT-M	T -B	LT-B	LT-M	T-B	LT-B	LT-M	T-B	LT-B	LT-M	T-B	LT-B	LT-M	T-B	LT-B	LT-M
Section A	***Brazil***	+	-	n/a	*** -	-	n/a	*** -	** -	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	-	n/a
	Mexico	*** +	*** +	n/a	*** -	-	n/a	*** -	*** -	n/a	n/a	n/a	n/a	n/a	n/a	n/a	** -	-	n/a
	Mexico, ols	-	+	n/a	*** +	** +	n/a	*** -	*** -	n/a	*** +	** +	n/a	n/a	n/a	n/a	*** -	** -	n/a
	India	+	+	-	*** -	** +	* ** +	*** -	*** -	*** -	n/a	n/a	n/a	***** +**	***** +**	***** -**	-	***** -**	***** -**
	South Korea	*** +	*** -	+	+	** * +	*** +	*** -	*** -	*** -	n/a	n/a	n/a	** +	*** +	*** -	** +	* +	** +
	Jordan	+	*** +	*** +	+	*** +	** +	*** -	* -	-	n/a	n/a	n/a	** +	+	** * -	+	+	+
	Malaysia	*** +	*** +	*** +	+	*** +	*** +	*** -	*** -	*** -	n/a	n/a	n/a	*** +	+	*** -	** -	-	-
	Pakistan	+	+	+	-	+	** +	*** -	-	-	n/a	n/a	n/a	-	*** -	-	** -	-	* -
	Thailand	+	n/a	n/a	*** +	n/a	n/a	**-	n/a	n/a	n/a	n/a	n/a	*** +	n/a	n/a	* +	n/a	n/a
	Turkey	+	-	** +	+	+	+	** -	+	-	n/a	n/a	n/a	+	+	*** -	-	** -	+
	Zimbabwe	+	** +	+	+	*** +	** +	+	+	-	n/a	n/a	n/a	-	-	+	** +	+	+
Sec.B	MEXICO	-	-	*** -	+	*** +	*** +	*** -	-	*** -	+	-	** -	-	*** +	** -	+	* +	+
	MEXICO, ols	*** +	*** +	+	* -	** +	** +	*** -	* -	*** -	*** -	*** -	-	+	* +	* -	+	+	+

**p<0.10 ** p<0.05 *** p<0.01 Significant at 10, 5 and 1 percent level, respectively.*
n/a: Not available

Booth et al. (2001) concentrated on analysing, whenever possible[185], the total book-debt and the long-term debt at book and market values to empirically validate the capital structure theory in emerging markets. They proposed that developing markets might have substantially lower amounts of long-term debt than developed countries, this as result of their dependency on trade credit (i.e. short-term debt). Further, *Booth et al.'s (2001)* findings showed a pronounced difference between these two ratios (total book-debt and long-term debt) among the sampled countries. *Table 5.5 'Debt ratios*' displays a summary of these results.

Table 5.5 Debt ratios

The results of this investigation elaborating on Booth *et al.*'s (2001) methodology are presented in the first row of this table, while *Booth et al.'s (2001)* outcomes are displayed from row 2 to row 12. The four different measures of debt are defined as follows. Total book-debt ratio is total liabilities divided by total liabilities plus net worth, while long-term book-debt ratio is total liabilities minus current liabilities divided by total liabilities minus current liabilities plus net worth. Market-debt ratios substitute the net worth values for equity market values.

	Researchers	No. of companies	Time Period	Total Book-Debt Ratio (%)	Total Market-Debt Ratio (%)	Long-term book-debt Ratio (%)	Long-term mkt-debt Ratio (%)
MEXICO	*This Investigation*	78	2000 - 2007	**47.99%**	**48.04%**	**30.76%**	**33.04%**
Mexico	*Booth et al. (2001)*	99	1984 - 1990	**34.70%**	n/a	**13.80%**	n/a
Brazil		49	1985 - 1991	30.30%	n/a	30.30%	n/a
India		99	1980 - 1990	67.10%	n/a	34.00%	34.70%
Jordan		38	1983 - 1990	47.00%	n/a	11.50%	18.60%
Malaysia		96	1983 - 1990	41.80%	n/a	13.10%	7.10%
Pakistan		96	1980 - 1987	65.60%	n/a	26.00%	18.90%
South Korea		93	1980 - 1990	73.40%	n/a	49.40%	64.30%
Thailand		64	1983 - 1990	49.40%	n/a	n/a	n/a
Turkey		45	1983 - 1990	59.10%	n/a	24.20%	10.80%
Zimbabwe		48	1980 - 1988	41.50%	n/a	13.00%	26.30%

n/a: Not available.

[185] Total book-debt was computed for all the ten countries forming this sample, whereas because of lack of financial data, total market-debt was not available for Brazil and Mexico. Long-term book debt was calculated for all these countries except Thailand, while long-term market-debt was not available for Brazil, Mexico and Thailand.

It is worth noticing that, according to these findings, Mexico was considered to be a country with low debt displaying ratios equal to 34.7 and 13.8 in total book-debt and long-term book-debt, respectively. These ratios supported Booth *et al.*'s EMs' trade credit dependency argument. Nonetheless, when elaborating on *Booth et al.'s (2001*) methodology using Mexican data over the period 2000 to 2007, both debt ratios increased, particularly the long-term book-ratio whose mean augmented more than twice to reach 30.76%. The growth in the long-term book-debt ratio could be a feasible result of the advance in the macro-economic conditions achieved by Mexico at the time of this investigation, when compared to the Mexican macro-economic environment from 1984 to 1990.

Following the analytical approach used to examine Rajan and Zingales' (1995) work at the beginning of this section, the assessment of Booth et al.'s (2001) research starts by testing their model as a pooled regression with cluster-robust standard errors, firstly without controlling for industry effects, and later, controlling for these effects using dummy variables. *Booth et al.'s* model, thus could be expressed as follows,

$$leverage_{it} = \alpha + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, risk_{it} + \beta_5\, mk\text{-}bk\ ratio_{it} + \beta_6\, tax\ rate_{it} + u_{it} \quad \text{.....models (2), (6) and (14)}$$

where *leverage* is any of the three ratios (viz. total book-debt, long-term book-debt or long-term market-debt) for the firm *i* at time *t.* *Letting γ denote the sum of all the dummy variables controlling for the industry sectors, the previous model can be re-written as:*

$$leverage_{it} = \alpha + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, risk_{it} + \beta_5\, mk\text{-}bk\ ratio_{it} + \beta_6\, tax\ rate_{it} + \Sigma\, \gamma\ dummy\ sectors_{it} + u_{it} \quad \text{.....models (4) (8) and (16)}$$

After this, the Hausman test and the Hausman and Sigmamore test are carried out to determine whether FE or RE models are most appropriate for these models. The results of these tests indicate that the FE model is more suitable for total and long-term debt at both book and market values because RE are efficient but inconsistent. The model is then specified and run as a panel regression with a FE estimator, firstly

without controlling for industry effects, and later, controlling for the industrial effects using dummy variables.

Under FE, Booth et al.'s model could be expressed as:

$$leverage_{it} = \alpha_i + \beta_1\ size_{it} + \beta_2\ tangibility_{it} + \beta_3\ roa_{it} + \beta_4\ risk_{it} + \beta_5\ mk\text{-}bk\ ratio_{it} + \beta_6\ tax\ rate_{it} + \varepsilon_{it} \quad \text{.....models (1), (5) and (13)}$$

Letting γ denote the sum of all the dummy variables controlling for the industry sectors, the previous model can be re-written as:

$$leverage_{it} = \alpha_i + \beta_1\ size_{it} + \beta_2\ tangibility_{it} + \beta_3\ roa_{it} + \beta_4\ risk_{it} + \beta_5\ mk\text{-}bk\ ratio_{it} + \beta_6\ tax\ rate_{it} + \Sigma\ \gamma\ dummy\ sectors_{it} + \varepsilon_{it} \quad \text{.....models (3), (7) and (15)}$$

In general, from *Table 5.6 'Regression Results'* it appears that the pooled models yield more significant-correlated coefficients than the FE models do when debt is measured at book values. Nevertheless, it is important to keep in mind that the error term is better specified under the FE model (according to the Hausman and Hausman and Sigmamore tests performed). Therefore, special attention is given to FE models' results. The FE regressions find that the industry sectors effects are *time-invariant* for all the measures of leverage used, therefore all the sector variables yield a zero coefficient with no significant correlation.

Some uniform results are obtained from these models. For example: profitability and business risk show to be negatively correlated with debt in both models (FE and pooled models), except in the case of the total book-debt regression with risk. The profitability coefficients are highly correlated with total book-debt and long-term market-debt; whilst the risk coefficients are highly correlated with long-term market-debt, under the FE model. Further, tangibility shows a positive correlated coefficient in all models, apart from when leverage is measured in terms of total book-debt, and it is highly correlated for long-term debt measured at booth book and market values. This evidence may lead us to think that Mexican publicly traded firms have experienced a trade-off between a target level of debt and the effects of the information asymmetry and agency problems. It seems that more profitable firms prefer to use less

debt, this without overlooking their target level of debt, which is denoted by the importance of their corporate levels of risk and asset tangibility. Further, the fact that tangibility shows to be highly negative-significant correlated with long-term debt but not with total debt, may reflect the reliance of these firms on short-term trade, as Booth *et al*. (2001) pointed out.

Surprisingly, under the FE model, size is negatively correlated to debt but only highly significantly correlated when leverage proxy for long-term market-debt. On the hand, tax rate shows a positive correlation only significant for long-term book-debt. Moreover, mixed evidence is displayed by the market-to-book ratio, which shows to be positively and negatively correlated with total book-debt (under the pooled and FE models, respectively). It is highly significantly correlated (positively) with long-term debt measured at book values, and negatively when measured at market values. These findings may reinforce the assumption that the agency and the informational asymmetry costs are very important in the financial decisions of emerging markets. In other words, larger companies (which are expected to have better information disclosure policies and therefore less informational problems) may experience lower expected costs of financial distress, which may enable them to tap the bond-market more easily. Additionally, some country factors appeared to have also influenced these findings since the shift on the correlated sign of the market-to-book ratio, when compared book to market values, could be attributed to the inflation rate.

Table 5.6 Regression Results –Booth et al. (2001) Framework–

This table shows the correlation of the total book-debt (Panel A), long-term book-debt (Panel B), and long-term market-debt (Panel C) –each as dependent variable– against the six company factors suggested by *Booth et al. (2001).* Total book-debt is calculated as total liabilities divided by total liabilities and net worth. Long-term debt is total liabilities less current liabilities divided by total liabilities less current liabilities plus net worth whilst long-term market-debt substituted the net worth by the average equity market value.

The six regressors are computed as follows: tangibility is the ratio of total assets minus current assets divided total assets; market-to-book is the equity market value divided by net worth; size is the natural logarithm of sales divided by 100; profitability to is the earnings before interest and taxes (EBIT) divided by total assets; tax rate is the percentage from earning before and earnings after tax; while business risk is the variability of return on assets.

All the variables (regressand and regressors) correspond to the period 2000 to 2007. Standard errors are presented in parenthesis.

The estimated models are the following,

$leverage_{it} = \alpha + \beta_1 \text{tangibility}_{it} + \beta_2 \text{size}_{it} + \beta_3 \text{roa}_{it} + \beta_4 \text{risk}_{it} + \beta_5 \text{mk-bk ratio}_{it} + \beta_6 \text{tax rate}_{it} + u_{it}$ .....models (2), (6) and (14)

$leverage_{it} = \alpha + \beta_1 \text{tangibility}_{it} + \beta_2 \text{size}_{it} + \beta_3 \text{roa}_{it} + \beta_4 \text{risk}_{it} + \beta_5 \text{mk-bk ratio}_{it} + \beta_6 \text{tax rate}_{it} + \Sigma\, \gamma \text{ dummy sectors}_{it} + u_{it}$ .....models (4), (8) and (16)

$leverage_{it} = \alpha_i + \beta_1 \text{tangibility}_{it} + \beta_2 \text{size}_{it} + \beta_3 \text{roa}_{it} + \beta_4 \text{risk}_{it} + \beta_5 \text{mk-bk ratio}_{it} + \beta_6 \text{tax rate}_{it} + \varepsilon_{it}$ .....models (1), (5) and (13)

$leverage_{it} = \alpha_i + \beta_1 \text{tangibility}_{it} + \beta_2 \text{size}_{it} + \beta_3 \text{roa}_{it} + \beta_4 \text{risk}_{it} + \beta_5 \text{mk-bk ratio}_{it} + \beta_6 \text{tax rate}_{it} + \Sigma\, \gamma \text{ dummy sectors}_{it} + \varepsilon_{it}$ .....models (3), (7) and (15)

Table 5.6 (Cont.) Regression Results –Booth et al. (2001) Framework–

	Panel A				**Panel B**			
	Total book debt ratios				*Long-term book debt ratios*			
	FE	**OLS rob**	**FE**	**OLS rob**	**FE**	**OLS rob**	**FE**	**OLS rob**
size	-0.3872	**3.4266*** **	-0.3872	**4.0230*** **	-1.4477	**2.8846*** **	-1.4477	**3.4196*** **
	(0.9145)	(1.0843)	(0.9145)	(0.9575)	(1.1004)	(0.9822)	(1.1004)	(0.8473)
tangibility	0.0549	**-0.1305***	0.0549	-0.1407	**0.2971*** **	**0.1044** **	**0.2971*** **	**0.1131***
	(0.0459)	(0.0768)	(0.0459)	(0.0854)	(0.0552)	(0.0519)	(0.0552)	(0.0602)
ROA	**-0.4222*** **	**-1.0844*** **	**-0.4222*** **	**-1.0461*** **	-0.1415	**-0.3418***	-0.1415	-0.2516
	(0.0910)	(0.2300)	(0.0910)	(0.1947)	(0.1095)	(0.1779)	(0.1095)	(0.1789)
risk	0.4897	**-4.0322*** **	0.4897	**-4.2365*** **	-0.4468	**-3.7074*** **	-0.4468	**-4.6675*** **
	(1.0249)	(1.1609)	(1.0249)	(1.3042)	(1.2332)	(1.1214)	(1.2332)	(1.3515)
mk-bk ratio	-0.0035	0.0091	-0.0035	0.0055	**0.0155*** **	**0.0165***	**0.0155*** **	**0.0162** **
	(0.0022)	(0.0120)	(0.0022)	(0.0095)	(0.0026)	(0.0088)	(0.0026)	(0.0065)
eff tax rate	0.0007	0.0002	0.0007	0.0019	**0.0077***	0.0104	**0.0077***	0.0105
	(0.0036)	(0.0067)	(0.0036)	(0.0055)	(0.0043)	(0.0094)	(0.0043)	(0.0091)
consumer disc serv			0.0000	**0.1128*** **			0.0000	**0.1216*** **
			(0.0000)	(0.0417)			(0.0000)	(0.0378)
health care			0.0000	**0.1108*** **			0.0000	0.0328
			(0.0000)	(0.0386)			(0.0000)	(0.0389)
industrial			0.0000	**0.0956***			0.0000	**0.1484*** **
			(0.0000)	(0.0523)			(0.0000)	(0.0458)
material			0.0000	**0.1153*** **			0.0000	**0.1312*** **
			(0.0000)	(0.0410)			(0.0000)	(0.0345)
telecomm			0.0000	**0.2328*** **			0.0000	**0.1536*** **
			(0.0000)	(0.0587)			(0.0000)	(0.0522)
_cons	**0.5367*** **	0.1609	**0.5367*** **	-0.0091	**0.3337** **	-0.1557	**0.3337** **	**-0.3306*** **
	(0.1401)	(0.1568)	(0.1401)	(0.1384)	(0.1686)	(0.1429)	(0.1686)	(0.1218)
N	616	616	616	616	616	616	616	616
r2	0.0667	0.1873	0.0667	0.3113	0.1397	0.1663	0.1397	0.2921
r2_o	0.0046		0.0046		0.0149		0.0149	
r2_b	0.0004		0.0004		0.0013		0.0013	
sigma_u	0.1658		0.1658		0.1552		0.1552	
sigma_e	0.0762		0.0762		0.0917		0.0917	
rho	0.8257		0.8257		0.7413		0.7413	

Standard errors in parentheses
**** p<0.10 ** p<0.05 *** p<0.01***

Table 5.6 (cont.) Regression Results –Booth et al. (2001) Framework–

	Panel C				**Panel D**			
	Total market debt ratios				*Long-term market debt ratios*			
	FE	**OLS rob**	**FE**	**OLS rob**	**FE**	**OLS rob**	**FE**	**OLS rob**
size	**-4.8647*** **	0.3289	**-4.8647*** **	0.7150	**-4.7245*** **	0.3370	**-4.7245*** **	0.6868
	(1.3540)	(1.5037)	(1.3540)	(1.3180)	(1.6588)	(1.4156)	(1.6588)	(1.2090)
tangibility	**0.3045*** **	-0.0329	**0.3045*** **	-0.0393	**0.5001*** **	**0.1907** **	**0.5001*** **	**0.1998** **
	(0.0679)	(0.0948)	(0.0679)	(0.1121)	(0.0832)	(0.0763)	(0.0832)	(0.0909)
ROA	**-0.9524*** **	**-1.6714*** **	**-0.9524*** **	**-1.6279*** **	**-0.6674*** **	**-0.9820*** **	**-0.6674*** **	**-0.8945*** **
	(0.1348)	(0.2170)	(0.1348)	(0.2255)	(0.1651)	(0.2567)	(0.1651)	(0.2703)
risk	**-3.6550** **	-3.5659	**-3.6550** **	-4.0398	**-3.6528** **	-2.8576	**-3.6528** **	-3.9649
	(1.5175)	(2.7633)	(1.5175)	(2.6459)	(1.8590)	(3.3954)	(1.8590)	(2.9025)
mk-bk ratio	**-0.0209*** **	**-0.0305** **	**-0.0209*** **	**-0.0327** **	**-0.0101** **	**-0.0254**	**-0.0101** **	**-0.0250**
	(0.0032)	(0.0132)	(0.0032)	(0.0131)	(0.0040)	(0.0134)	(0.0040)	(0.0128)
eff tax rate	0.0053	0.0083	0.0053	0.0102	0.0084	0.0134	0.0084	0.0141
	(0.0053)	(0.0094)	(0.0053)	(0.0092)	(0.0065)	(0.0132)	(0.0065)	(0.0131)
consumer disc serv			0.0000	**0.0973** **			0.0000	**0.1074** **
			(0.0000)	(0.0462)			(0.0000)	(0.0449)
health care			0.0000	**0.0805**			0.0000	0.0193
			(0.0000)	(0.0470)			(0.0000)	(0.0451)
industrial			0.0000	**0.1311** **			0.0000	**0.1777*** **
			(0.0000)	(0.0611)			(0.0000)	(0.0550)
material			0.0000	**0.1568*** **			0.0000	**0.1730*** **
			(0.0000)	(0.0475)			(0.0000)	(0.0457)
telecomm			0.0000	**0.2212*** **			0.0000	**0.1621**
			(0.0000)	(0.0752)			(0.0000)	(0.0822)
_cons	**1.2000*** **	**0.6825*** **	**1.2000*** **	**0.5364*** **	**0.8636*** **	0.3143	**0.8636*** **	0.1597
	(0.2074)	(0.2233)	(0.2074)	(0.1962)	(0.2541)	(0.2093)	(0.2541)	(0.1831)
N	616	616	616	616	616	616	616	616
r2	0.2954	0.3672	0.2954	0.4418	0.1860	0.2147	0.1860	0.3106
r2_o	0.2236		0.2236		0.1308		0.1308	
r2_b	0.2104		0.2104		0.1280		0.1280	
sigma_u	0.1988		0.1988		0.1936		0.1936	
sigma_e	0.1128		0.1128		0.1382		0.1382	
rho	0.7565		0.7565		0.6624		0.6624	

Standard errors in parentheses
**** p<0.10 ** p<0.05 *** p<0.01***

5.3.2 Capital Structure Model of Mexican publicly traded companies

After contrasting the results from leading capital structure investigations to the results from Mexico, a general model for the Mexican publicly traded companies is specified. It is worth noticing that my replication of the previous two models (viz. Rajan and Zingales (1995) and Booth *et al*. (2001)) had two aims. One was to study the behaviour of their determinants and to document their applicability to the capital structure of Mexican publicly traded companies. The second was to have/produce more *'comparable-basis'* evidence of the possible evolution/changes, if any, of the effects of those determinants in the capital structure of Mexican publicly traded companies. All this aimed at helping a better understanding of the factors behind the financing decisions of these companies.

In this section, the new-specified capital structure model is an elaboration on the Boot et al.'s (2001) proposed model for emerging markets. To this end, two variables namely liquidity and consolidation are included with the aim of controlling for the particularities of Mexican publicly traded companies.

The stylised firm-specific variables used in this model are: size, tangibility, profitability (ROA), growth opportunities (market-to-book ratio), risk, effective tax rate, liquidity and consolidation. The first four variables have been widely tested for both emerging and developed economies (Rajan and Zingales 1995, Jung *et al*. 1996, Wald 1999, Wiwattanakantang 1999, Booth *et al*. 2001, and, Glen and Singh 2004, among others). The fifth and the sixth variable are expected to have a higher effect on emerging economies, whilst the seventh and eighth are selected considering the features of the Mexican companies. Table 5.7 summarises the calculation of these variables, and contrasts them with those used by Rajan and Zingales (1995) and Booth *et al*.'s (2001) analyses, which are the frameworks used to specify this model.

Table 5.7 Specification of Dependent and Control Variables

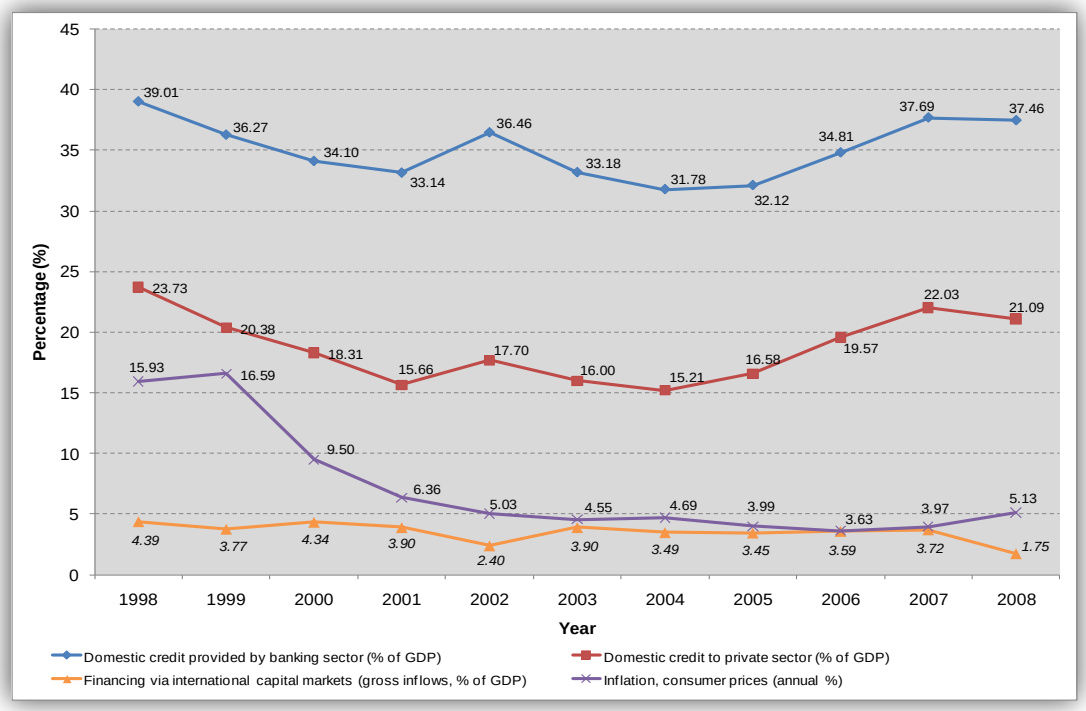
Variables	Rajan and Zingales, 1995	Booth et al., 2001	This Investigation
Leverage	**Book Leverage** Adjusted debt *to* (Adjusted debt *plus* book value adjusted equity) **Mkt Leverage** Adjusted debt *to* (Adjusted debt *plus* market value adjusted equity)	**Total book-debt ratio:** Total liabilities *divided by* (total liabilities *plus* net worth). **Long-term book-debt ratio:** (total liabilities *minus* current liabilities) *divided by* (total liabilities *minus* current liabilities *plus* net worth). **Long-term market-debt ratio:** (total liabilities *minus* current liabilities) *divided by* (total liabilities *minus* current liabilities *plus* average equity market value).	**Total book-debt ratio:** Total liabilities *divided by* (total liabilities *plus* net worth). **Long-term book-debt ratio:** (total liabilities *minus* current liabilities) *divided by* (total liabilities *minus* current liabilities *plus* net worth). **Short-term book-debt ratio:** (current liabilities *divided by* (current liabilities *plus* net worth). Note: For Market values net worth is substituted by average equity
Tangibility of Assets	Fixed assets *to* total asset	Total assets *minus* current assets *divided by* total assets.	Real estate and plant at book value *divided by* Book value of total assets.
Investment Opportunities	**Market-to-Book Ratio:** Market value of assets *to* book value of assets	**Market-to-Book Ratio:** Equity market value *divided by* net worth.	**Market-to-Book Ratio:** Equity market value *divided by* net worth.
Company Size	Natural logarithm of net sales	Natural logarithm of sales multiplied by 100.	Natural logarithm of sales multiplied by 100
Profitability	Cash-flow from operations normalized by the book value of assets	**ROA**: Earnings before tax *divided by* total assets	**ROA**: Earnings before tax *divided by* total assets
Business Risk		Variability of the earnings before interest and taxes *divided by* total assets, over the period of time.	Standard Deviation of Return on Assets.
Taxes		**Average tax rate:** Income before taxes *to* income after taxes.	**Average tax rate:** Income before taxes *to* income after taxes.
Liquidity			Book value of current assets *divided by* book value current liabilities
Consolidation			Binary variable taking values of zero or one depending on whether or not the account of the companies is consolidated or not.

The choice of these variables also responds to the availability of Mexican corporate information and to the objectives of this model in itself.

The main three objectives of this model are: first, to test whether the main determinants of the capital structure of developed markets apply to emerging markets. Secondly, to investigate whether country/firm-specific determinants might outweigh the effects of the common determinants in the financial policies of the Mexican publicly traded companies. Ultimately, to bring about some understanding of the financing policies of these companies.

The data used to estimate this model is organised as a balanced panel of 616 observations. As was explained previously in Section 4.2, these observations belong to 77 companies during the eight-year period from 2000 to 2007 inclusive.

Figure 5.3 Sources of domestic credit, financing by international capital markets and inflation percentages of Mexico.



The variables shown in this table are defined by the World Bank

Table 5.8 Summary of Descriptive Statistics

Statistics	**Total book leverage**	**Total market leverage**	**Long-term book leverage**	**Long-term market leverage**	**Short-term book leverage**	**Short-term market leverage**	**Size**	**Tangibility**	**Profitability**	**mk-bk ratio**	**Business risk**	**Effective tax rate**	**Q ratio**	**Liquidity**	**Individual**
Mean	0.4783	0.4856	0.3044	0.3338	0.3204	0.3470	0.1542	0.4843	0.0821	1.4658	0.0132	0.2371	1.0914	2.1176	0.5000
Standard Deviation	0.1779	0.2471	0.1697	0.2335	0.1802	0.2464	0.0178	0.2088	0.0697	2.2396	0.0042	0.9251	0.7924	1.8581	0.5004
Minimum	0.0280	0.0215	-0.1636	0.0000	0.0071	0.0125	0.1033	0.0001	-0.1714	-27.1977	0.0061	-12.2774	-0.8009	0.0367	0.0000
Maximum	1.1918	0.9955	0.8068	0.9762	1.1971	0.9945	0.1928	0.9858	0.3620	17.3055	0.0419	13.1772	4.9234	13.4734	1.0000
25th Percentile	0.3623	0.2833	0.1705	0.1458	0.2026	0.1413	0.1424	0.3462	0.0340	0.4938	0.0136	0.1334	0.6394	1.0666	0.0000
Median	0.4820	0.4734	0.2849	0.2726	0.2898	0.2828	0.1547	0.5214	0.0788	0.9743	0.0141	0.2927	0.9257	1.5474	0.5000
75th Percentile	0.6002	0.6906	0.4159	0.5026	0.4207	0.5150	0.1672	0.6357	0.1193	1.8257	0.0154	0.3846	1.3798	2.2316	1.0000
Observations	616	616	616	616	616	616	616	616	616	616	616	616	616	616	616

Table 5.9 Correlation Table

	total book debt	**total mkt debt**	**long-term book debt**	**long-term mkt debt**	**short-term book debt**	**short-term mkt debt**	**size**	**tangibility**	**ROA**	**mk-bk ratio**	**risk**	**eff tax rate**	**Q ratio**	**liquidity**	**consolidation**
total book debt	1														
total mkt debt	**0.5805***	1													
long-term bk debt	**0.6586***	**0.3362***	1												
long-term mkt debt	**0.4042***	**0.8574***	**0.5556***	1											
short-term bk debt	**0.8526***	**0.5238***	**0.2263***	**0.1675***	1										
short-term mkt debt	**0.5246***	**0.9297***	**0.0918***	**0.6800***	**0.6476***	1									
size	**-0.1833***	**-0.2764***	**-0.3038***	**-0.1855***	-0.0424	**-0.3213***	1								
tangibility	**-0.1693***	**-0.0771***	0.0396	**-0.2338***	**-0.2824***	-0.0155	-0.0262	1							
ROA	**0.2105***	**0.5428***	**0.0810***	**0.3612***	**0.3229***	**-0.5768***	**0.4664***	0.0009	1						
mk-bk ratio	**0.0764***	**0.4251***	**-0.2653***	**0.3312***	-0.0289	**0.4026***	**-0.3043***	**-0.1237***	**0.3349***	1					
risk	-0.0569	-0.0211	**0.0782***	-0.0262	-0.0287	0.0037	0.0082	0.0169	**0.0898***	0.0019	1				
eff tax rate	-0.0014	-0.0301	**0.0993***	0.0221	-0.0332	-0.0483	**0.1122***	**0.0681***	**0.1061***	0.0576	-0.0548	1			
Q ratio	**-0.1845***	**-0.7472***	**-0.1024***	**-0.5383***	**-0.3016***	**-0.7282***	**0.4096***	**-0.1858***	**0.5674***	**0.6978***	0.0063	0.0404	1		
liquidity	**0.5659***	**0.4450***	**-0.2566***	**-0.2704***	**0.5674***	**0.4707***	-0.0157	**-0.1734***	**0.2718***	0.0147	-0.0162	0.0049	**0.2887***	1	
consolidation	-0.0095	**0.2466***	**-0.0828***	**0.2848***	0.0437	**-0.1938***	**0.1080***	**-0.1066***	0.0479	**0.1450***	**0.4118***	-0.0273	**0.2141***	0.0165	1

**** p<0.10***

For the sake of comparability, this model will be tested following the same methodology previously carried out. However, bearing in mind that it has been documented that the pooled ols method could fail to account for time invariant heterogeneity, causing the parameter to be biased and inconsistent, one-way FE and RE estimations are used to test this model, which can be expressed as follows:

$$\textit{leverage}_{it} = \alpha_i + \beta_1\, \text{size}_{it} + \beta_2\, \text{tangibility}_{it} + \beta_3\, \text{roa}_{it} + \beta_4\, \text{mk-bk ratio}_{it} + \beta_5\, \text{risk}_{it} + \beta_6\, \text{tax rate}_{it} + \beta_7\, \text{liquidity}_{it} + \beta_8\, \text{consolidation}_{it} + \varepsilon_{it}$$

where *leverage* is any of the six ratios (total debt, long-term debt or short-term debt valued at either market price or book value) for the firm *i* at time *t*.

In order to control for the effects industry sector, I will allow γ to denote the sum of all the dummy variables controlling for them, so that the previous model can be re-written as:

$$\textit{leverage}_{it} = \alpha_i + \beta_1\, \text{size}_{it} + \beta_2\, \text{tangibility}_{it} + \beta_3\, \text{roa}_{it} + \beta_4\, \text{mk-bk ratio}_{it} + \beta_5\, \text{risk}_{it} + \beta_6\, \text{tax rate}_{it} + \beta_7\, \text{liquidity}_{it} + \beta_8\, \text{consolidation}_{it} + \Sigma\, \gamma\, \text{dummy sectors}_{it} + \varepsilon_{it}$$

In order to identify whether a FE model or a RE model is most appropriate for modelling this theoretical conceptualisation, the Hausman and the Hausman and Sigmamore tests are carried out. In this case, the aforementioned tests revealed that the RE estimator is preferred to the FE estimator (i.e. no rejection of the null hypothesis) for all the measures of leverage but for total-book debt ratio.

Finally, the results from the previous regressions are contrasted with those results from the regressions but with a robustness test. The statistical software used to estimate these equations is STATA 10. The robustness option in this software provides an estimation of standard errors by cluster-robust approximation. All these results are presented below in table 10.

Table 5.10 Regression Results –General Capital Structure Model–

This table shows the correlation of the total debt ratio, long-term debt ratio, and short-term debt ratio at book and market values. All of these measures act as the dependent variable, one at a time, whilst the eight company factors proposed are: size, tangibility, profitability, growth opportunities, risk, effective tax rate, liquidity and consolidation.

The leverage measures are calculated as follows: total book-debt equals total liabilities divided by total liabilities and net worth. Long-term book-debt is total liabilities less current liabilities divided by total liabilities less current liabilities plus net worth, and short-term book debt is current liabilities divided by total liabilities and net worth. The difference between book-ratios and market-ratios is that market-ratios use the average of equity market value instead of that of net worth.

The eight regressors are computed as follows: size is the natural logarithm of sales divided by 100; tangibility is the ratio of the book value of real estate and plant divided total assets; profitability is the earnings before interest and taxes (EBIT) divided by total assets; market-to-book ratio is the equity market value divided by net worth; business risk is the variability of return on assets; tax rate is the percentage from earning before and earnings after tax; liquidity is the book value of current assets divided by book value of current liabilities; and consolidation is a binary variable which took zero as a value when the company accounts were not consolidated and one when they were.

All the variables (regressand and regressors) correspond to the period 2000 to 2007. Standard errors are presented in parenthesis.

The estimated models are the following,

$$leverage_{it} = \alpha + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, mk\text{-}bk\ ratio_{it} + \beta_5\, risk_{it} + \beta_6\, tax\ rate_{it} + \beta_7\, liquidity_{it} + \beta_8\, consolidation_{it} + \varepsilon_{it} \text{.....}$$

....models (1), (2), (5), (6), (9), (10)

$$leverage_{it} = \alpha + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, mk\text{-}bk\ ratio_{it} + \beta_5\, risk_{it} + \beta_6\, tax\ rate_{it} + \beta_7\, liquidity_{it} + \beta_8\, consolidation_{it} + \Sigma\, \gamma\, dummy\ sectors_{it} + \varepsilon_{it} \text{....}$$

. models (3), (4), (7), (8), (11), (12)

Table 5.10 Regression Results (Cont.) –General Capital Structure Model–

	Total book debt				*Long-term book debt*				*Short book debt*			
	FE	**FE, vce**	**FE**	**FE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**
Size	**-1.8746****	-1.8746	**-1.8746****	-1.8746	**1.9613*****	**1.9613****	**2.4476*****	**2.4476****	-0.0006	-0.0006	0.0905	0.0905
	(0.9478)	(1.8909)	(0.9478)	(1.8909)	(0.7282)	(0.9870)	(0.7096)	(0.9533)	(0.6102)	(1.0402)	(0.6362)	(1.0527)
Tangibility	**-0.1392*****	-0.1392	**-0.1392*****	-0.1392	0.0531	0.0531	0.0664	0.0664	**-0.2942*****	**-0.2942*****	**-0.2890*****	**-0.2890*****
	(0.0452)	(0.0989)	(0.0452)	(0.0989)	(0.0453)	(0.0921)	(0.0447)	(0.0887)	(0.0388)	(0.0702)	(0.0399)	(0.0739)
ROA	**-0.3617*****	**-0.3617*****	**-0.3617*****	**-0.3617*****	**-0.2616****	**-0.2616***	**-0.2513****	**-0.2513***	**-0.3218*****	**-0.3218****	**-0.3275*****	**-0.3275****
	(0.0834)	(0.1201)	(0.0834)	(0.1201)	(0.1022)	(0.1424)	(0.1015)	(0.1438)	(0.0896)	(0.1475)	(0.0898)	(0.1473)
mk-bk ratio	-0.0013	-0.0013	-0.0013	-0.0013	**0.0183*****	**0.0183*****	**0.0180*****	**0.0180*****	-0.0034	-0.0034	-0.0036	-0.0036
	(0.0022)	(0.0066)	(0.0022)	(0.0066)	(0.0026)	(0.0045)	(0.0026)	(0.0045)	(0.0023)	(0.0071)	(0.0023)	(0.0072)
Risk	0.9740	0.9740	0.9740	0.9740	1.0149	1.0149	0.7462	0.7462	-0.6066	-0.6066	-0.6275	-0.6275
	(1.0658)	(1.1670)	(1.0658)	(1.1670)	(1.3379)	(1.3671)	(1.3344)	(1.3808)	(1.1772)	(1.2531)	(1.1794)	(1.2517)
eff tax rate	0.0010	0.0010	0.0010	0.0010	**0.0077***	0.0077	**0.0077***	0.0077	-0.0013	-0.0013	-0.0012	-0.0012
	(0.0034)	(0.0022)	(0.0034)	(0.0022)	(0.0044)	(0.0056)	(0.0044)	(0.0058)	(0.0039)	(0.0028)	(0.0039)	(0.0028)
Liquidity	**-0.0379*****	**-0.0379*****	**-0.0379*****	**-0.0379*****	**-0.0088***	**-0.0088****	**-0.0089***	**-0.0089****	**-0.0532*****	**-0.0532*****	**-0.0524*****	**-0.0524*****
	(0.0041)	(0.0084)	(0.0041)	(0.0084)	(0.0046)	(0.0042)	(0.0045)	(0.0043)	(0.0040)	(0.0085)	(0.0040)	(0.0086)
Consolidation	-0.0002	-0.0002	-0.0002	-0.0002	**-0.0460*****	**-0.0460*****	**-0.0462*****	**-0.0462*****	0.0123	0.0123	0.0124	0.0124
	(0.0076)	(0.0137)	(0.0076)	(0.0137)	(0.0094)	(0.0125)	(0.0094)	(0.0126)	(0.0083)	(0.0135)	(0.0083)	(0.0136)
consumer disc serv			0.0000	0.0000			**0.0946****	**0.0946****			0.0274	0.0274
			(0.0000)	(0.0000)			(0.0384)	(0.0419)			(0.0347)	(0.0343)
health care			0.0000	0.0000			0.0063	0.0063			0.0684	0.0684
			(0.0000)	(0.0000)			(0.0636)	(0.0391)			(0.0575)	(0.0484)
industrial			0.0000	0.0000			**0.1358*****	**0.1358*****			0.0295	0.0295
			(0.0000)	(0.0000)			(0.0416)	(0.0386)			(0.0376)	(0.0284)
material			0.0000	0.0000			**0.1230*****	**0.1230*****			**0.0622***	**0.0622****
			(0.0000)	(0.0000)			(0.0398)	(0.0336)			(0.0360)	(0.0297)
telecomm			0.0000	0.0000			**0.1517*****	**0.1517****			0.0788	0.0788
			(0.0000)	(0.0000)			(0.0538)	(0.0605)			(0.0486)	(0.0611)
_cons	**0.9336*****	**0.9336*****	**0.9336*****	**0.9336*****	-0.0027	-0.0027	-0.1614	-0.1614	**0.6091*****	**0.6091*****	**0.5593*****	**0.5593*****
	(0.1504)	(0.2826)	(0.1504)	(0.2826)	(0.1159)	(0.1535)	(0.1202)	(0.1542)	(0.0970)	(0.1558)	(0.1078)	(0.1626)
N	616	616	616	616	616	616	616	616	616	616	616	616
r2	0.1925	0.1925	0.1925	0.1925								
r2_o	0.2206	0.2206	0.2206	0.2206	0.1925	0.1925	0.3124	0.3124	0.4967	0.4967	0.5173	0.5173
r2_b	0.2268	0.2268	0.2268	0.2268	0.2266	0.2266	0.3941	0.3941	0.5807	0.5807	0.6067	0.6067
R2_w												
sigma_u	0.1436	0.1436	0.1436	0.1436	0.1237	0.1237	0.1093	0.1093	0.0995	0.0995	0.0990	0.0990
sigma_e	0.0710	0.0710	0.0710	0.0710	0.0924	0.0924	0.0924	0.0924	0.0815	0.0815	0.0815	0.0815
rho	0.8035	0.8035	0.8035	0.8035	0.6417	0.6417	0.5831	0.5831	0.5987	0.5987	0.5964	0.5964
theta					0.7446	0.7446	0.7136	0.7136	0.7219	0.7219	0.7207	0.7207

Standard errors in parentheses
**** p<0.10 ** p<0.05 *** p<0.01***

Table 5.10 Regression Results (Cont.) –General Capital Structure Model–

	Total market debt				*Long-term market debt*				*Short market debt*			
	RE	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**
size	-0.8548	-0.8548	-0.5576	-0.5576	0.3732	0.3732	0.7196	0.7196	**-1.3390***	-1.3390	-1.2057	-1.2057
	(0.8297)	(1.3272)	(0.8256)	(1.2271)	(0.9358)	(1.2965)	(0.9062)	(1.1834)	(0.8027)	(1.3030)	(0.8204)	(1.2349)
tangibility	0.0124	0.0124	0.0288	0.0288	**0.2135*****	**0.2135****	**0.2376*****	**0.2376****	**-0.1062****	-0.1062	**-0.0952***	-0.0952
	(0.0512)	(0.0950)	(0.0511)	(0.0966)	(0.0601)	(0.0941)	(0.0590)	(0.0926)	(0.0508)	(0.0963)	(0.0515)	(0.0994)
ROA	**-1.0281*****	**-1.0281*****	**-1.0267*****	**-1.0267*****	**-0.8298*****	**-0.8298*****	**-0.8092*****	**-0.8092*****	**-0.9230*****	**-0.9230*****	**-0.9217*****	**-0.9217*****
	(0.1142)	(0.1637)	(0.1135)	(0.1605)	(0.1408)	(0.2147)	(0.1390)	(0.2138)	(0.1166)	(0.1682)	(0.1164)	(0.1667)
mk-bk ratio	**-0.0166*****	-0.0166	**-0.0170*****	-0.0170	**-0.0068***	-0.0068	**-0.0074****	-0.0074	**-0.0164*****	-0.0164	**-0.0165*****	-0.0165
	(0.0029)	(0.0115)	(0.0029)	(0.0115)	(0.0036)	(0.0099)	(0.0036)	(0.0098)	(0.0030)	(0.0104)	(0.0030)	(0.0104)
risk	**3.1586****	**3.1586***	**2.9599****	**2.9599***	**4.0393****	**4.0393***	**3.6762****	**3.6762***	**2.7212***	2.7212	**2.6114***	2.6114
	(1.4927)	(1.7326)	(1.4880)	(1.6904)	(1.8546)	(2.3242)	(1.8408)	(2.2137)	(1.5311)	(1.8520)	(1.5298)	(1.8234)
eff tax rate	0.0042	0.0042	0.0043	0.0043	0.0071	0.0071	0.0072	0.0072	0.0010	0.0010	0.0010	0.0010
	(0.0049)	(0.0047)	(0.0049)	(0.0048)	(0.0061)	(0.0075)	(0.0061)	(0.0077)	(0.0050)	(0.0042)	(0.0050)	(0.0043)
liquidity	**-0.0357*****	**-0.0357*****	**-0.0358*****	**-0.0358*****	**-0.0105***	**-0.0105***	**-0.0112***	**-0.0112***	**-0.0482*****	**-0.0482*****	**-0.0483*****	**-0.0483*****
	(0.0052)	(0.0068)	(0.0051)	(0.0065)	(0.0062)	(0.0058)	(0.0061)	(0.0058)	(0.0052)	(0.0083)	(0.0052)	(0.0081)
consolidation	**-0.1089*****	**-0.1089*****	**-0.1083*****	**-0.1083*****	**-0.1279*****	**-0.1279*****	**-0.1266*****	**-0.1266*****	**-0.0847*****	**-0.0847*****	**-0.0843*****	**-0.0843*****
	(0.0105)	(0.0167)	(0.0105)	(0.0166)	(0.0131)	(0.0193)	(0.0131)	(0.0191)	(0.0108)	(0.0171)	(0.0108)	(0.0169)
consumer disc serv			**0.0896***	**0.0896***			**0.1133****	**0.1133****			0.0538	0.0538
			(0.0458)	(0.0473)			(0.0472)	(0.0498)			(0.0446)	(0.0420)
health care			0.0620	0.0620			0.0138	0.0138			0.0604	0.0604
			(0.0759)	(0.0461)			(0.0780)	(0.0426)			(0.0739)	(0.0538)
industrial			**0.1616*****	**0.1616*****			**0.2041*****	**0.2041*****			**0.1107****	**0.1107*****
			(0.0497)	(0.0413)			(0.0511)	(0.0432)			(0.0483)	(0.0348)
material			**0.1656*****	**0.1656*****			**0.1775*****	**0.1775*****			**0.1331*****	**0.1331*****
			(0.0476)	(0.0447)			(0.0487)	(0.0476)			(0.0462)	(0.0467)
telecomm			**0.1442****	**0.1442****			**0.1496****	**0.1496****			0.0894	0.0894
			(0.0642)	(0.0681)			(0.0660)	(0.0697)			(0.0625)	(0.0739)
_cons	**0.8076*****	**0.8076*****	**0.6629*****	**0.6629*****	**0.2822***	0.2822	0.1150	0.1150	**0.8131*****	**0.8131*****	**0.7222*****	**0.7222*****
	(0.1321)	(0.2199)	(0.1401)	(0.2152)	(0.1488)	(0.2017)	(0.1532)	(0.1957)	(0.1277)	(0.2072)	(0.1390)	(0.2057)
N	616	616	616	616	616	616	616	616	616	616	616	616
r2												
r2_o	0.4927	0.4927	0.5575	0.5575	0.2802	0.2802	0.3897	0.3897	0.5315	0.5315	0.5660	0.5660
r2_b	0.5312	0.5312	0.6113	0.6113	0.2826	0.2826	0.4512	0.4512	0.6014	0.6014	0.6434	0.6434
R2_w												
sigma_u	0.1429	0.1429	0.1316	0.1316	0.1501	0.1501	0.1322	0.1322	0.1321	0.1321	0.1273	0.1273
sigma_e	0.1025	0.1025	0.1025	0.1025	0.1291	0.1291	0.1291	0.1291	0.1059	0.1059	0.1059	0.1059
rho	0.6600	0.6600	0.6222	0.6222	0.5746	0.5746	0.5117	0.5117	0.6088	0.6088	0.5910	0.5910
theta	0.7540	0.7540	0.7344	0.7344	0.7090	0.7090	0.6735	0.6735	0.7273	0.7273	0.7178	0.7178

Standard errors in parentheses
**** p<0.10 ** p<0.05 *** p<0.01***

5.3.3 Further Determinants of the Capital Structure of Mexican Publicly Traded Companies

5.3.3.1 Capital Structure and Market Power Interaction

After analysing the behaviour of some of the well-known capital structure determinants suggested for Emerging Markets (EM) and for Developed Markets (DM), the effects of product market structure are also assessed in the capital structure choices of the Mexican publicly traded companies. To this end, Pandey's (2004) main arguments, which can be considered a result of the interaction of market conditions, agency problems and bankruptcy cost, are tested

It has been documented that corporate capital structure is modified by product market, as this affects the competitive behaviour and strategies of companies. Furthermore, it has been suggested how, in favourable economic conditions, oligopolistic companies might chose to maximise their output as a competing strategy in order to optimise their profitability. This theory seems to hold also in unfavourable economic conditions due to the limited liability status of shareholders who passed the adverse outcomes onto lenders. Accordingly, it is expected that oligopolistic companies *'..., in contrast to firms in competitive markets, would employ higher levels of debt to produce more when opportunities to earn higher profits arise'* (Pandey 2004, p. 79)

Since this analysis is a further investigation of the determinants of capital structure of Mexican publicly traded companies already discussed in previous sections, I employ the general capital structure model already written, and include an approximation of Tobin's q variable to account for the effects of product market. It is worth mentioning that market-to-book value variable is not included for this analysis as it might cause correlation to Tobin's q variable. The variables included in this model, therefore, are: size, tangibility, profitability (ROA), risk, effective tax rate, liquidity, consolidation, Tobin's Q, Tobin's Q^2 and Tobin's Q^3.

Market Power proxy Variable

Market Power can be analysed under two different perspectives: (1) the characteristics of inputs and product, and (2) the product market competition strategy (Harris and Raviv 1991). The most common strategic variables considered to carry both types of analysis have being product price and product quantity.

The most common proxies used for analysing product market effects are the Herfindahl-Hirschman Index, the Lener Index and Tobin's Q. The latter is becoming popular due to the degree of detail in the information needed to build any of the previous indexes (Pandey 2004). This study follows the clear and simple methodology provided by Chung and Pruitt (1994) to build a fairly accurate proxy of Tobin's Q ratio, which has been used by scholars like Pandey (2004) and Lovisuth (2008) in their research.

Tobin's Q

Tobin's Q is defined as the ratio of the sum of market value equity plus liquidating value of the firm's preferred stock plus long-term debt and net current assets to the book value of total assets. This approximation of Tobin's Q assumes that the replacement values of a firm's plant, equipment and inventories are equal to their book values (Chung and Pruitt 1994).

5.3.3.1.1 Empirical Testing

To keep the same methodology employed in the previous sections, I estimate this model using FE and RE estimations. The new variable included is Tobin's q ratio linear, squared and cubic; therefore, the model can be express as follows:

$$\begin{aligned} leverage_{it} = {} & \alpha_i + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, risk_{it} + \beta_5\, liquidity_{it} + \beta_6\, tax\ rate_{it} \\ & + \beta_7\, tobin's\ q_{it} + \beta_8\, (tobin's\ q)^2_{it} + \beta_9\, (tobin's\ q)^3_{it} + \beta_{10}\, consolidation_{it} + \varepsilon_{it} \end{aligned}$$

where *leverage* is any of the six ratios (total debt, long-term debt or short-term debt valued at either market price or book value) for the firm *i* at time *t*.

In order to control for the effects industry sector, I will allow γ to denote the sum of all the dummy variables controlling for them, so that the previous model can be re-written as:

$$\textit{leverage}_{it} = \alpha_i + \beta_1\, \text{size}_{it} + \beta_2\, \text{tangibility}_{it} + \beta_3\, \text{roa}_{it} + \beta_4\, \text{risk}_{it} + \beta_5\, \text{liquidity}_{it} + \beta_6\, \text{tax rate}_{it} + \beta_7\, \text{tobin's } q_{it} + \beta_8\, (\text{tobin's } q)^2_{it} + \beta_9\, (\text{tobin's } q)^3_{it} + \beta_{10}\, \text{consolidation}_{it} + \Sigma\, \gamma\, \text{dummy sectors}_{it} + \varepsilon_{it}$$

In order to identify whether a FE model or a RE model is most appropriate for modelling this theoretical conceptualisation, the Hausman and the Hausman and Sigmamore tests are carried out. In this case, the aforementioned tests revealed that the FE estimator is preferred for the three book leverage ratios and for long-term market debt. The RE estimator is more accurate for testing this model against the total market value and short-term market value.

Finally, the results from the previous regressions are contrasted with those results from the regressions but with a robustness test. The statistical software used to estimate these equations is STATA 10.

Table 5.11. Regression Results –Market Power Interaction–

This table shows the correlation of the total debt ratio, long-term debt ratio, and short-term debt ratio at book and market values. All of these measures act as the dependent variable, whilst the ten company factors proposed are: size, tangibility, profitability, risk, effective tax rate, liquidity, consolidation, tobin's q, tobin's q squared and tobin's q cubic.

The leverage measures are calculated as follows: total book-debt equals total liabilities divided by total liabilities and net worth. Long-term book-debt is total liabilities less current liabilities divided by total liabilities less current liabilities plus net worth, and short-term book debt is current liabilities divided by total liabilities and net worth. The difference between book-ratios and market-ratios is that market-ratios use the average of equity market value instead of that of net worth.

The eight regressors are computed as follows: size is the natural logarithm of sales divided by 100; tangibility is the ratio of the book value of real estate and plant divided total assets; profitability to is the earnings before interest and taxes (EBIT) divided by total assets; business risk is the variability of return on assets; tax rate is the percentage from earning before and earnings after tax; liquidity is the book value of current assets divided by book value of current liabilities; consolidation is a binary variable which took zero as a value when the company accounts were not consolidated and one when they were; and Tobin's q the ratio of the sum of market value equity plus liquidating value of the firm's preferred stock plus long-term debt and net current assets to the book value of total assets.

All the variables (regressand and regressors) correspond to the period 2000 to 2007. Standard errors are presented in parenthesis.

The estimated models are the following,

$$leverage_{it} = \alpha + \beta_1\ size_{it} + \beta_2\ tangibility_{it} + \beta_3\ roa_{it} + \beta_4\ liquidity_{it} + \beta_5\ risk_{it} + \beta_6\ tax\ rate_{it} + \beta_7\ consolidation_{it} + \beta_8\ tobins'q_{it} + \beta_9\ tobins'q^2_{it} + \beta_{10}\ tobins'q^3_{it} + \varepsilon_{it}$$ .....models (1), (2), (5), (6), (9), (10)

$$leverage_{it} = \alpha + \beta_1\ size_{it} + \beta_2\ tangibility_{it} + \beta_3\ roa_{it} + \beta_4\ liquidity_{it} + \beta_5\ risk_{it} + \beta_6\ tax\ rate_{it} + \beta_7\ liquidity_{it} + \beta_8\ tobins'q_{it} + \beta_9\ tobins'q^2_{it} + \beta_{10}\ tobins'q^3_{it} + \Sigma\ \gamma\ dummy\ sectors_{it} + \varepsilon_{it}$$ ..... models (3), (4), (7), (8), (11), (12)

Table 5.11 Regression Results (Cont.) –Market Power Interaction–

	Total book debt				*Long term book debt*				*Short term book debt*			
	FE	**FE, vce**	**FE**	**FE, vce**	**FE**	**FE, vce**	**FE**	**FE, vce**	**FE**	**FE, vce**	**FE**	**FE, vce**
size	-1.3594	-1.3594	-1.3594	-1.3594	0.8502	0.8502	0.8502	0.8502	**-1.6700***	-1.6700	**-1.6700***	-1.6700
	(0.8847)	(1.7070)	(0.8847)	(1.7070)	(1.1354)	(2.7186)	(1.1354)	(2.7186)	(0.8572)	(1.5632)	(0.8572)	(1.5632)
tangibility	**-0.1669*****	-0.1669	**-0.1669*****	-0.1669	**0.2316*****	0.2316	**0.2316*****	0.2316	**-0.3592*****	**-0.3592*****	**-0.3592*****	**-0.3592*****
	(0.0406)	(0.1040)	(0.0406)	(0.1040)	(0.0521)	(0.1581)	(0.0521)	(0.1581)	(0.0394)	(0.1093)	(0.0394)	(0.1093)
ROA	**-0.2465*****	**-0.2465***	**-0.2465*****	**-0.2465***	**-0.3879*****	**-0.3879****	**-0.3879*****	**-0.3879****	0.0091	0.0091	0.0091	0.0091
	(0.0820)	(0.1269)	(0.0820)	(0.1269)	(0.1052)	(0.1563)	(0.1052)	(0.1563)	(0.0794)	(0.1102)	(0.0794)	(0.1102)
risk	0.4556	0.4556	0.4556	0.4556	1.8544	1.8544	1.8544	1.8544	-0.7272	-0.7272	-0.7272	-0.7272
	(1.0073)	(1.0622)	(1.0073)	(1.0622)	(1.2927)	(1.4770)	(1.2927)	(1.4770)	(0.9759)	(1.1114)	(0.9759)	(1.1114)
eff tax rate	0.0012	0.0012	0.0012	0.0012	**0.0083****	0.0083	**0.0083****	0.0083	-0.0013	-0.0013	-0.0013	-0.0013
	(0.0032)	(0.0023)	(0.0032)	(0.0023)	(0.0041)	(0.0065)	(0.0041)	(0.0065)	(0.0031)	(0.0029)	(0.0031)	(0.0029)
Q ratio	**-0.1719*****	**-0.1719*****	**-0.1719*****	**-0.1719*****	**0.3087*****	**0.3087*****	**0.3087*****	**0.3087*****	**-0.3542*****	**-0.3542*****	**-0.3542*****	**-0.3542*****
	(0.0208)	(0.0398)	(0.0208)	(0.0398)	(0.0267)	(0.0786)	(0.0267)	(0.0786)	(0.0201)	(0.0444)	(0.0201)	(0.0444)
Q2 ratio	**0.0795*****	**0.0795*****	**0.0795*****	**0.0795*****	**-0.1411*****	**-0.1411*****	**-0.1411*****	**-0.1411*****	**0.1595*****	**0.1595*****	**0.1595*****	**0.1595*****
	(0.0117)	(0.0206)	(0.0117)	(0.0206)	(0.0150)	(0.0391)	(0.0150)	(0.0391)	(0.0114)	(0.0237)	(0.0114)	(0.0237)
Q3 ratio	**-0.0108*****	**-0.0108*****	**-0.0108*****	**-0.0108*****	**0.0181*****	**0.0181*****	**0.0181*****	**0.0181*****	**-0.0204*****	**-0.0204*****	**-0.0204*****	**-0.0204*****
	(0.0019)	(0.0031)	(0.0019)	(0.0031)	(0.0025)	(0.0058)	(0.0025)	(0.0058)	(0.0019)	(0.0037)	(0.0019)	(0.0037)
liquidity	**-0.0325*****	**-0.0325*****	**-0.0325*****	**-0.0325*****	**-0.0113****	-0.0113	**-0.0113****	-0.0113	**-0.0402*****	**-0.0402*****	**-0.0402*****	**-0.0402*****
	(0.0040)	(0.0069)	(0.0040)	(0.0069)	(0.0052)	(0.0083)	(0.0052)	(0.0083)	(0.0039)	(0.0089)	(0.0039)	(0.0089)
consolidation	0.0062	0.0062	0.0062	0.0062	**-0.0394*****	**-0.0394*****	**-0.0394*****	**-0.0394*****	**0.0301*****	**0.0301*****	**0.0301*****	**0.0301*****
	(0.0076)	(0.0126)	(0.0076)	(0.0126)	(0.0097)	(0.0140)	(0.0097)	(0.0140)	(0.0074)	(0.0110)	(0.0074)	(0.0110)
consumer disc serv			0.0000	0.0000			0.0000	0.0000			0.0000	0.0000
			(0.0000)	(0.0000)			(0.0000)	(0.0000)			(0.0000)	(0.0000)
health care			0.0000	0.0000			0.0000	0.0000			0.0000	0.0000
			(0.0000)	(0.0000)			(0.0000)	(0.0000)			(0.0000)	(0.0000)
industrial			0.0000	0.0000			0.0000	0.0000			0.0000	0.0000
			(0.0000)	(0.0000)			(0.0000)	(0.0000)			(0.0000)	(0.0000)
material			0.0000	0.0000			0.0000	0.0000			0.0000	0.0000
			(0.0000)	(0.0000)			(0.0000)	(0.0000)			(0.0000)	(0.0000)
telecomm			0.0000	0.0000			0.0000	0.0000			0.0000	0.0000
			(0.0000)	(0.0000)			(0.0000)	(0.0000)			(0.0000)	(0.0000)
_cons	**0.9358*****	**0.9358*****	**0.9358*****	**0.9358*****	-0.0445	-0.0445	-0.0445	-0.0445	**1.0114*****	**1.0114*****	**1.0114*****	**1.0114*****
	(0.1391)	(0.2406)	(0.1391)	(0.2406)	(0.1784)	(0.4550)	(0.1784)	(0.4550)	(0.1347)	(0.2443)	(0.1347)	(0.2443)
N	616	616	616	616	616	616	616	616	616	616	616	616
r2	0.2849	0.2849	0.2849	0.2849	0.2502	0.2502	0.2502	0.2502	0.5150	0.5150	0.5150	0.5150
r2_o	0.2772	0.2772	0.2772	0.2772	0.0929	0.0929	0.0929	0.0929	0.5407	0.5407	0.5407	0.5407
r2_b	0.2757	0.2757	0.2757	0.2757	0.0443	0.0443	0.0443	0.0443	0.5487	0.5487	0.5487	0.5487
R2_w												
sigma_u	0.1387	0.1387	0.1387	0.1387	0.1436	0.1436	0.1436	0.1436	0.1070	0.1070	0.1070	0.1070
sigma_e	0.0669	0.0669	0.0669	0.0669	0.0859	0.0859	0.0859	0.0859	0.0649	0.0649	0.0649	0.0649
rho	0.8111	0.8111	0.8111	0.8111	0.7364	0.7364	0.7364	0.7364	0.7314	0.7314	0.7314	0.7314
theta												

Standard errors in parentheses
**** p<0.10*** ***** p<0.05*** ****** p<0.01***

Table 5.11 Regression Results (Cont.) –Market Power Interaction–

	Total market debt				*Long-term market debt*				*Short term market debt*			
	RE	**RE, vce**	**RE**	**RE, vce**	**FE**	**FE, vce**	**FE**	**FE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**
size	0.8012	0.8012	**1.1056***	1.1056	2.4661	2.4661	2.4661	2.4661	0.5163	0.5163	0.7339	0.7339
	(0.6400)	(1.0135)	(0.6430)	(0.9730)	(1.6176)	(2.9528)	(1.6176)	(2.9528)	(0.5550)	(0.8131)	(0.5713)	(0.8127)
tangibility	-0.0607	-0.0607	-0.0513	-0.0513	**0.2854*** **	**0.2854***	**0.2854*** **	**0.2854***	**-0.2164*** **	**-0.2164*** **	**-0.2115*** **	**-0.2115*** **
	(0.0389)	(0.0759)	(0.0390)	(0.0743)	(0.0743)	(0.1629)	(0.0743)	(0.1629)	(0.0346)	(0.0618)	(0.0352)	(0.0620)
ROA	**-0.4601*** **	**-0.4601*** **	**-0.4591*** **	**-0.4591*** **	**-0.6616*** **	**-0.6616*** **	**-0.6616*** **	**-0.6616*** **	**-0.3035*** **	**-0.3035*** **	**-0.3029*** **	**-0.3029*** **
	(0.0929)	(0.1374)	(0.0925)	(0.1368)	(0.1498)	(0.2256)	(0.1498)	(0.2256)	(0.0849)	(0.1090)	(0.0848)	(0.1101)
risk	**1.9699***	1.9699	1.8590	1.8590	**3.9546** **	3.9546	**3.9546** **	3.9546	1.3543	1.3543	1.3128	1.3128
	(1.1597)	(1.3517)	(1.1556)	(1.3342)	(1.8417)	(2.5876)	(1.8417)	(2.5876)	(1.0626)	(1.4098)	(1.0604)	(1.4012)
eff tax rate	0.0035	0.0035	0.0034	0.0034	0.0061	0.0061	0.0061	0.0061	0.0005	0.0005	0.0004	0.0004
	(0.0038)	(0.0041)	(0.0038)	(0.0042)	(0.0058)	(0.0077)	(0.0058)	(0.0077)	(0.0035)	(0.0034)	(0.0035)	(0.0035)
Q ratio	**-0.3053*** **	**-0.3053*** **	**-0.3027*** **	**-0.3027*** **	**0.1257*** **	0.1257	**0.1257*** **	0.1257	**-0.4769*** **	**-0.4769*** **	**-0.4767*** **	**-0.4767*** **
	(0.0240)	(0.0819)	(0.0239)	(0.0809)	(0.0380)	(0.1070)	(0.0380)	(0.1070)	(0.0220)	(0.0789)	(0.0220)	(0.0777)
Q2 ratio	**0.0238***	0.0238	**0.0232***	0.0232	**-0.1421*** **	**-0.1421** **	**-0.1421*** **	**-0.1421** **	**0.1205*** **	**0.1205*** **	**0.1212*** **	**0.1212*** **
	(0.0135)	(0.0421)	(0.0135)	(0.0416)	(0.0214)	(0.0572)	(0.0214)	(0.0572)	(0.0124)	(0.0401)	(0.0124)	(0.0394)
Q3 ratio	**0.0038***	0.0038	**0.0038***	0.0038	**0.0240*** **	**0.0240*** **	**0.0240*** **	**0.0240*** **	**-0.0092*** **	-0.0092	**-0.0092*** **	-0.0092
	(0.0023)	(0.0062)	(0.0023)	(0.0062)	(0.0036)	(0.0090)	(0.0036)	(0.0090)	(0.0021)	(0.0057)	(0.0021)	(0.0057)
liquidity	**-0.0135*** **	**-0.0135** **	**-0.0137*** **	**-0.0137** **	0.0028	0.0028	0.0028	0.0028	**-0.0233*** **	**-0.0233*** **	**-0.0234*** **	**-0.0234*** **
	(0.0041)	(0.0064)	(0.0041)	(0.0065)	(0.0074)	(0.0095)	(0.0074)	(0.0095)	(0.0037)	(0.0054)	(0.0037)	(0.0054)
consolidation	**-0.0612*** **	**-0.0612*** **	**-0.0621*** **	**-0.0621*** **	**-0.1082*** **	**-0.1082*** **	**-0.1082*** **	**-0.1082*** **	**-0.0406*** **	**-0.0406*** **	**-0.0416*** **	**-0.0416*** **
	(0.0085)	(0.0130)	(0.0085)	(0.0129)	(0.0139)	(0.0227)	(0.0139)	(0.0227)	(0.0078)	(0.0130)	(0.0078)	(0.0131)
consumer disc serv			**0.0855** **	**0.0855** **			0.0000	0.0000			**0.0566***	**0.0566** **
			(0.0355)	(0.0335)			(0.0000)	(0.0000)			(0.0309)	(0.0261)
health care			0.0467	**0.0467***			0.0000	0.0000			0.0568	**0.0568***
			(0.0588)	(0.0256)			(0.0000)	(0.0000)			(0.0512)	(0.0294)
industrial			**0.1156*** **	**0.1156*** **			0.0000	0.0000			**0.0636***	**0.0636** **
			(0.0385)	(0.0381)			(0.0000)	(0.0000)			(0.0335)	(0.0291)
material			**0.1287*** **	**0.1287*** **			0.0000	0.0000			**0.0957*** **	**0.0957*** **
			(0.0369)	(0.0282)			(0.0000)	(0.0000)			(0.0321)	(0.0290)
telecomm			**0.0931***	**0.0931** **			0.0000	0.0000			0.0107	0.0107
			(0.0497)	(0.0472)			(0.0000)	(0.0000)			(0.0432)	(0.0562)
_cons	**0.7361*** **	**0.7361*** **	**0.6112*** **	**0.6112*** **	-0.1132	-0.1132	-0.1132	-0.1132	**0.7877*** **	**0.7877*** **	**0.7061*** **	**0.7061*** **
	(0.1009)	(0.1624)	(0.1079)	(0.1609)	(0.2542)	(0.4952)	(0.2542)	(0.4952)	(0.0874)	(0.1251)	(0.0957)	(0.1306)
N	616	616	616	616	616	616	616	616	616	616	616	616
r2					0.3663	0.3663	0.3663	0.3663				
r2_o	0.7022	0.7022	0.7359	0.7359	0.3186	0.3186	0.3186	0.3186	0.7839	0.7839	0.7984	0.7984
r2_b	0.7269	0.7269	0.7678	0.7678	0.2904	0.2904	0.2904	0.2904	0.8237	0.8237	0.8397	0.8397
R2_w												
sigma_u	0.1088	0.1088	0.1020	0.1020	0.1567	0.1567	0.1567	0.1567	0.0902	0.0902	0.0882	0.0882
sigma_e	0.0795	0.0795	0.0795	0.0795	0.1224	0.1224	0.1224	0.1224	0.0734	0.0734	0.0734	0.0734
rho	0.6518	0.6518	0.6219	0.6219	0.6210	0.6210	0.6210	0.6210	0.6021	0.6021	0.5914	0.5914
theta	0.7498	0.7498	0.7343	0.7343					0.7238	0.7238	0.7180	0.7180

Standard errors in parentheses
**** p<0.10 ** p<0.05 *** p<0.01***

Figure 5.4 Market Power and Debt at Book values

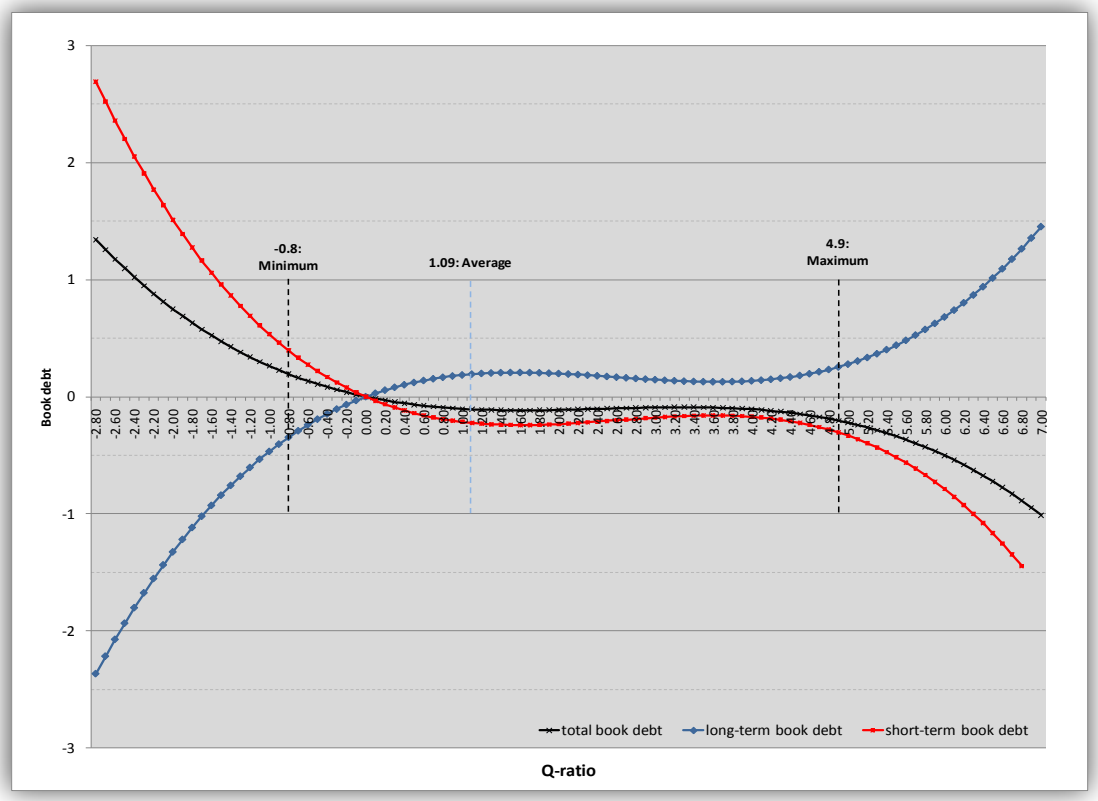
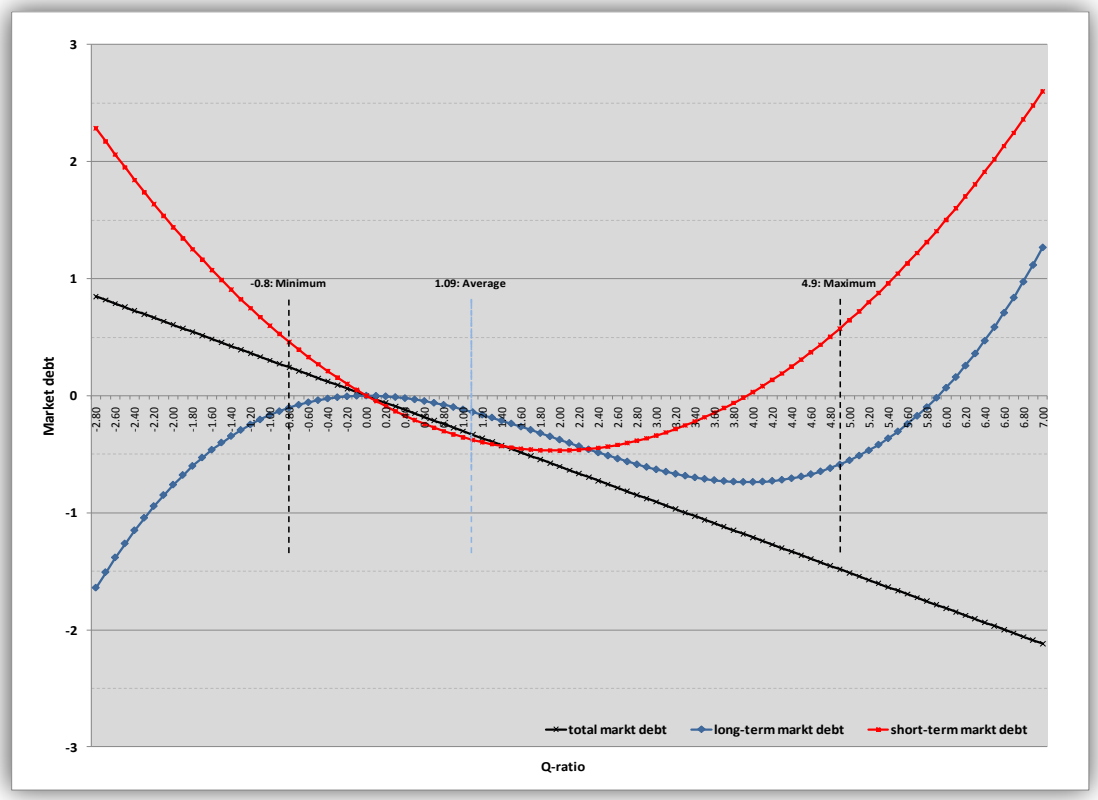


Figure 5.5 Market Power and Debt at Market values



5.3.3.2 Capital Structure and Corporate Ownership Analysis

As previously discussed in the literature review chapter, corporate capital structures reflect the financing policies selected by managers. In general, there are three main sources of financing for a new project, which are: (1) retained earnings, (2) debt instruments, or/and (3) new capital stock. These three different sources, besides forming the corporate capital structure, evidence the ownership structure of the company. This is because sources 1 and 3 (i.e. retained earnings and new shares) represent the ownership of the shareholders, whilst source 2 (or debt instruments) is the ownership of debt-holders.

5.3.3.2.1 Theoretical Framework

Important corporate ownership literature has investigated the relationship between ownership structure and control, ownership structure and private benefits and ownership structure and corporate performance. La Porta, Lopez-de-Silanes, and Shleifer (1999) documented that the most common ownership pattern around the word is the concentrated ownership structure. Further, this concentrated structure is often also a controlling structure exerted by founder families. Grossman and Hart (1988) have shown that deviations from the pattern one-share-one-vote are optimal in protecting large private benefits of control. Shleifer and Vishny (1986) pointed out that one of the most important costs that large shareholders can impose on the firm, due to their typically poorly diversified portfolio, is excessive risk aversion or risk avoidance. Burkart, Panunzi and Shleifer (2003) discussed the trade-off between and external professional manager's skills and the resulting agency costs associated with an outside manager. Hagelin *et al*. (2006) suggested that for family-controlled firms there may be a trade-off between negative entrenchment effects, stemming from the use of dual-class shares and the implementation of costly risk-management programs. Regarding corporate performance, Anderson and Reeb (2003) documented how founding-family ownership enhanced firm performance. Furthermore, Villalonga and Amit (2006) have shown that founding-family ownership only improves performance as long as the founder is active in the firm. They also documented that dual-class

shares, pyramids and voting agreements reduce the founder premium. Finally, Faccio, Lang and Young (2001) found that family firms in Western Europe and East Asia often rely on devices that separate voting rights from cash-flow rights. They also found that in Western Europe family firms increase dividends to inhibit the families' propensity to expropriate minority shareholders' rights.

This researcher would like to believe this empirical study can contribute to existing literature by providing some evidence on how the voting structure of the direct ownership of Mexican publicly traded companies may influence the corporate financing policies of these companies. To carry out this study, Mexican publicly traded companies were classified either as family controlled or institutionally controlled, depending on the nature of the ultimate controller. Using the majority rule as a criterion, fifty percent or more was the proportion of voting rights needed to be considered the ultimate controller. The variables incorporated to test ownership and control in the financing choices are: family control, votes, discrepancy of capital and votes (votes/capital), dual shares & ADRs, CPOs, outside block, and the interaction between family control and control are included.

It is of note that this investigation focuses on the direct ownership of the companies due to the scarcity of publicly available corporate information needed to trace the ultimate shareholder by working out the indirect ownership.

5.3.3.2.1.1 Definition of the Variables

Family-Controlled or Institutional-Shareholder Controlled Firms

The two main types of ownership patterns are dispersed-held ownership and concentrated ownership structures. It has been argued that the first one typifies better the structure patterns presented in developed economies, whilst the second is a key feature of emerging economies. For example, preliminary research proposed that the ownership and control of companies might go together, becoming more dispersed as countries reach better levels of development and globalization in their markets (e.g. Berle and Means 1932, cited by La Porta *et al.* 1999, p. 471). However, contemporary

evidence has shown that concentrated-held ownership is the predominant corporate structure around the world, and that it often results in controlling structures owned by founder families (see for example: La Porta *et al*., 1999 and Shleifer and Vishny, 1986). Consequently, two main types of shareholders can be identified: family shareholders and institutional shareholders[186]. In this sense, it may be considered that a company is controlled by a family, if a family, a group of families or a close group of individuals hold shares with a percentage of voting rights allowing them to influence the key corporate decisions. Conversely, a company is institutionally controlled when there is no evidence of any family or close group of individuals having shares granting a significant percentage of voting rights which allow them to affect the corporate decisions.

To identify the type of ownership and control structure of a company, Hagelin *et al.* (2006) distinguished between family-controlled firms and institutional-shareholders controlled firms by using a binary variable that took a value of one when the company was considered to be controlled by a family, and zero when controlled by institutions.

Similarly, in this study the family control variable is a binary variable that takes the value of one when a family or a close group of individuals hold fifty per cent or more of the total voting rights of the company stock. It takes the value of zero otherwise. I expect to find a negative relationship between family-controlled firms and levels of debt since family-controlled companies would prefer to issue dual-class shares and/or neutral investment securities rather than debt.

Differential Voting-Rights Securities

Existing literature has documented that the issuance of shares with differential voting-rights favours the formation of controlling structures and tunnelling practices (La Porta *et al*. 1998, Khanna and Yafeh 2007, Castañeda Ramos 1999). Alternatively, Hagelin *et al*., (2006) and Anderson and Reeb, (2003) proposed that the issuance of shares with differential-voting rights in family-controlled companies[187]could help in alleviating the

[186] In this argument institutional shareholders might be thought to act as owners who protect and guard their rights and the rights of the people they represent (e.g. minority rights).

[187] According to Hagelin *et al*. (2006), the corporate level of risk might be decreased mainly because the issuance of shares with differential-voting rights may substitute the issuance of debt. This allows controlling shareholders to invest less capital in the company while retaining the control of the company

level of corporate risk by decreasing the corporate level of debt to issue. Hence, a negative correlation should be expected between securities with differential voting rights and leverage; that is to say, between dual-class shares & American Depositary Receipts (ADRs) and leverage; as well as between Certificates of Ordinary Participation (CPOs) and leverage.

Dual-Class Shares & American Depositary Receipts (ADRs)

Hagelin *et al.*'s study controlled for the issuance of dual class of shares through a binary variable that equalled to one when companies issued dual-class shares, and to zero when they did not.

This investigation incorporates in this variable the control for the usage of ADRs[188]. I controlled for these two equity instruments/securities together because both had the same effect in terms of cash-flow rights and voting rights, in the companies sampled. In this analysis, either dual-class shares or the shares that were traded by means of ADRs granted the same cash-flow rights as the common shares to their shareholders, but no voting rights as most of these ADRs were traded over-the-counter market (OTC). I calculated this variable as a percentage of the total amount of dual-class shares and the shares traded under ADRs with respect to the total outstanding shares.

Certificates of Ordinary Participation (CPOs)

An Ordinary Participation Certificate, or CPO by its Spanish acronym, is a type of equity security, viz. a certificate of common shares, which can be used by Mexican listed companies to publicly trade their common shares.

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besides having some free cash-flow for other investments. This may diversify their own portfolio and decrease their risk-aversion.

[188] An American Depositary Receipt (ADR) is a receipt representing the ownership in the shares of a non-USA company trading in North-American financial markets. Generally speaking, ADRs are traded under an ADR program set up between the issuer company and a financial depositary. ADRs programs can be either type I, type II or Type III. The Type I program is the less regulated by the USA Security Exchange Commission (SEC) but only can trade on the over-the-counter (OTC) market. Program Type II requires a file registration statement of the issuer company under the US SEC and periodicals reports. The shares trade under this ADR program can be traded in any US Stock Exchange (i.e. NYSE, NASDAQ or AMEX). Finally, type III ADR program is the most regulated as the issuer company is required to adhere to stricter rules that are similar to those followed by US companies. This might be because issuer companies setting this type of program are looking to raise capital rather that trade their current issued stock.

I incorporated this variable due to the heavy use of this security by the companies sampled. I explicitly separated these from the dual-class shares and ADRs because, besides having a very discrete difference in the effect on the allocation of voting rights, it has been suggested that the issuance of CPOs reflects a pyramidal organisational structure of Business Groups. I hope to find some evidence that may give some lead to being able to identify the nature of the business group, in terms of positive or negative, as was discussed previously in chapter 4.

Discrepancy between Cash-Flow Rights and Voting-Rights

According to Hagelin *et al.'s* (2006) investigation, it could be argued that family-controlled companies may issue differential voting-rights shares as a substitute for debt, while keeping for themselves the higher voting-shares in order to preserve the control of the company with a smaller investment. Following this reasoning and the methodology they employed, to test the effects of differential-voting rights shares just described, I calculate three variables, viz. capital, votes and the ratio of votes and capital (votes/capital). I am assuming that family-controlled companies would show a higher votes/capital ratio than that of companies institutionally controlled. Further, for family-controlled companies a negative correlation between the vote-capital ratio and the level of debt is also expected.

Capital

This proxy denotes the controlling shareholder's fraction of equity capital in the company with respect to the total outstanding shares.

Votes

This proxy is equal to the controlling shareholder's fraction of voting rights in the company with respect to the total outstanding shares.

Votes-Capital Ratio

This variable aims to measure the discrepancy between cash-flow rights and voting rights, if any. This variable is equal to the votes variable divided by the capital variable.

Outside-voting Block

It has been argued that the presence of an outside voting-block may ameliorate minority-shareholders rights' expropriation as the result of its monitoring. Hence, corporate financing decisions may be indirectly affected by its presence. Hagelin *et al*. (2006) calculated this variable as a binary value that was equal to one if there was one (or more) outside shareholder possessing at least 10 percent or more of the voting-shares of the company, and to zero otherwise. I followed the criterion of 10 percent of the voting-shares to acknowledge the existence of an outside-voting block, and computed this variable as the percentage of the voting-rights granted by the shares held by the outside-block with respect to the total outstanding shares. I surmised a negative correlation between outside-voting block and debt.

5.3.3.2.2 Data and Sample Selection

For this particular stage of the analysis, the primary source of information were some corporate filings such as the annual reports, company's bylaws and the acts of the annual ordinary and annual extraordinary shareholders meetings, gathered from either the Mexican Stock Exchange (BMV) website or the U.S. Securities and Exchange Commission (EDGAR 2009).

The ownership structure subset has a sample of 35 (out of 105) non-financial companies listed in the BMV, which publicly provided their corporate information for an uninterrupted period of six years, from 2001 to 2006. The sampling selection criterion applied to this subset is to include all non-financial companies being part of the IPC CompMx Index of the BMV, valid during October 2006 to March 2007, that disclosed their corporate ownership structure in detail, e.g. the stock participation of the major shareholders with the specification of the class of shares, over the uninterrupted period from 2001 to 2006. This information has been extracted from diverse annual corporate filings, such as the annual reports, company's bylaws and the acts of the annual ordinary and extraordinary shareholders meetings available from the BMV and/or the EDGAR database. The IPC CompMx Index is formed by 60 companies representing the three different segments into which the BMV is divided by its size, viz. large capitalization segment, medium capitalization segment and small capitalization

segment. The companies that are chosen to be representative of each segment are the ones having the highest trading volumes in the BMV and the largest market capitalization value over the last six months with respect to the sector they represent (Bolsa Mexicana de Valores 2009). As of October 2007, from the 60 companies forming the IPC CompMx Index, only 35 disclosed their corporate ownership structure throughout the period of six years. A graphical representation of these 35 companies is presented in *Figure 5.6 Distribution of the sub-sampled companies per sector* below.

Table 5.12 Sample Companies for the Ownership and Capital Structure testing.

The following table presents the ticker, the company name and the sector of the 35 Mexican publicly traded companies listed in the Mexican Stock Exchange (MSE) forming the sample for the ownership and capital structure testing. From the six active sectors comprised by the "new scheme" used by the MSE since 2009, only five were used to allocate these companies. These sectors were; materials, industrials, consumer discretionary and services (CDS), consumer staples, and telecommunication services.

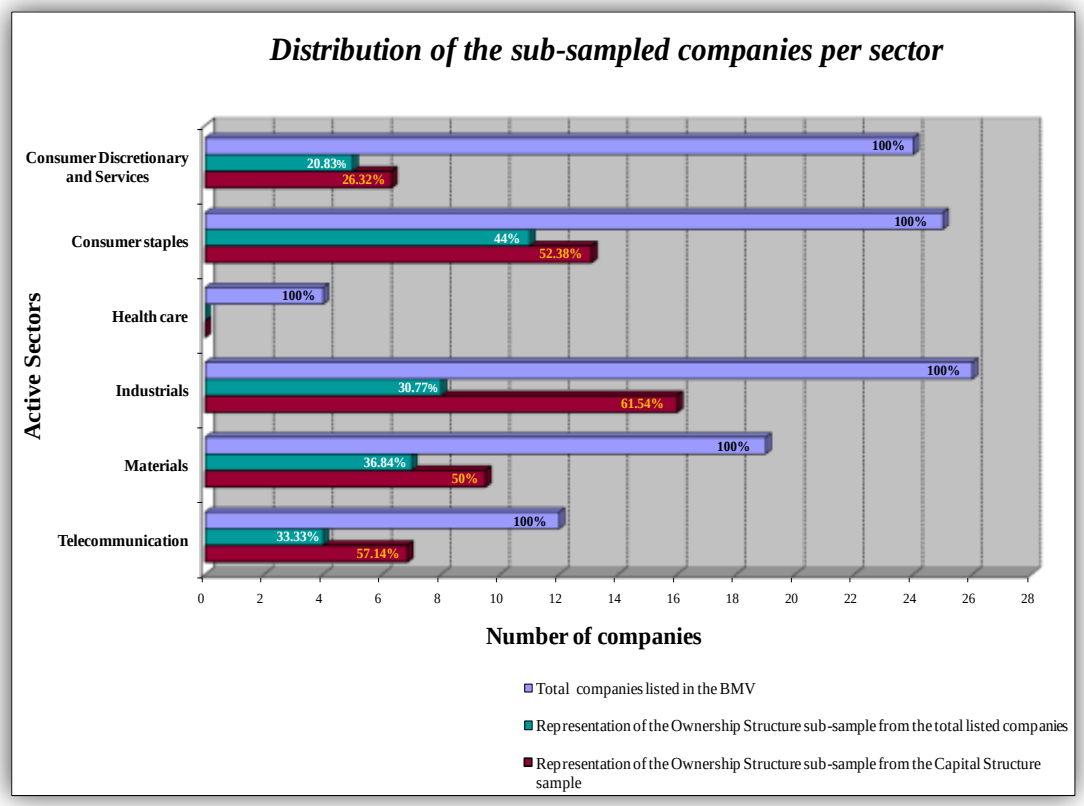
	TICKER	***NAME OF THE COMPANY***	***SECTOR***
1	**ALFA**	*ALFA, S.A.B. DE C.V.*	Industrial
2	**ALSEA**	*ALSEA, S.A.B. DE C.V.*	CDS
3	**ARA**	*CONSORCIO ARA, S.A.B. DE C.V.*	Industrial
4	**ASUR**	*GRUPO AEROPORTUARIO DEL SURESTE, S.A.B. DE C.V.*	Industrial
5	**BACHOCO**	*INDUSTRIAS BACHOCO, S.A.B. DE C.V.*	Consumer Staples
6	**BIMBO**	*GRUPO BIMBO, S.A.B. DE C.V.*	Consumer Staples
7	**CEMEX**	*CEMEX, S.A.B. DE C.V.*	Materials
8	**CIE**	*CORPORACION INTERAMERICANA DE ENTRETENIMIENTO, S.A.B. DE C.V.*	CDS
9	**CMOCTEZ**	*CORPORACION MOCTEZUMA, S.A.B. DE C.V.*	Materials
10	**CONTAL**	*GRUPO CONTINENTAL, S.A.B.*	Consumer Staples
11	**ELEKTRA**	*GRUPO ELEKTRA, S.A. DE C.V.*	CDS
12	**FEMSA**	*FOMENTO ECONOMICO MEXICANO, S.A.B. DE C.V.*	Consumer Staples
13	**GCARSO**	*GRUPO CARSO, S.A.B. DE C.V.*	Industrial
14	**GCC**	*GRUPO CEMENTOS DE CHIHUACHUA, S.A.B. DE C.V.*	Materials
15	**GEO**	*CORPORACION GEO, S.A.B. DE C.V.*	Industrial
16	**GIGANTE**	*GRUPO GIGANTE, S.A.B. DE C.V.*	Consumer Staples
17	**GISSA**	*GRUPO INDUSTRIAL SALTILLO, S.A.B. DE C.V.*	Industrial
18	**GMEXICO**	*GRUPO MEXICO, S.A.B. DE C.V.*	Materials
19	**GMODELO**	*GRUPO MODELO, S.A.B. DE C.V.*	Consumer Staples
20	**GRUMA**	*GRUMA, S.A.B. DE C.V.*	Consumer Staples
21	**ICA**	*EMPRESAS ICA, S.A.B. DE C.V.*	Industrial
22	**ICH**	*INDUSTRIAS CH, S.A.B. DE C.V.*	Materials
23	**KIMBER**	*KIMBERLY-CLARK DE MEXICO, S.A.B. DE C.V.*	Consumer Staples
24	**KOF**	*COCA-COLA FEMSA, S.A.B. DE C.V.*	Consumer Staples

	TICKER	NAME OF THE COMPANY	SECTOR
25	**LAMOSA**	*GRUPO LAMOSA, S.A.B. DE C.V.*	Industrial
26	**LIVEPOL**	*EL PUERTO DE LIVERPOOL, S.A.B. DE C.V.*	CDS
27	**POSADAS**	*GRUPO POSADAS, S.A. DE C.V.*	CDS
28	**SIMEC**	*GRUPO SIMEC, S.A.B. DE C.V.*	Materials
29	**SORIANA**	*ORGANIZACION SORIANA, S.A.B. DE C.V.*	Consumer Staples
30	**TELECOM**	*CARSO GLOBAL TELECOM, S.A.B. DE C.V.*	Telecom Services
31	**TELMEX**	*TELEFONOS DE MEXICO, S.A.B. DE C.V.*	Telecom Services
32	**TLEVISA**	*GRUPO TELEVISA, S.A.*	Telecom Services
33	**TVAZTCA**	*TV AZTECA, S.A. DE C.V.*	Telecom Services
34	**VITRO**	*VITRO, S.A.B. DE C.V.*	Materials
35	**WALMEX**	*WAL-MART DE MEXICO, S.A.B. DE C.V.*	Consumer Staples

Source, *Bolsa Mexicana de Valores*, as of March 2009.

Figure 5.6 Distribution of the sub-sampled companies per sector

This graph shows the sub-sampled companies for the analysis of Ownership Structure.



5.3.3.2.3 Empirical Testing

This empirical testing was carried out with a sample of 35 companies of which 22 were classified as family-controlled since theirs founders, a family/group of families or a close group of individuals, directly posses the higher percentage of shares with voting-rights, whereas 12 companies were considered as institutionally controlled since their main investor (in terms of direct ownership of shares with voting-rights) was a company or group of companies. Finally, one of these companies was considered to be institutionally-controlled the first three years of this sample (i.e. from 2001 to 2003) and family-controlled the other last three years, that is from 2004 to 2006. This company was excluded from the analysis so as to be able to use balanced panel data techniques.

To keep with the same methodology employed in the previous sections, I will estimate the model using FE and RE estimations. The new variables included measuring ownership and control effects are: family control, votes, discrepancy of capital and votes (votes/capital), dual shares & ADRs, CPOs, outside block, and the interaction between family control and control. Hence, the model can be expressed as follows:

$$\begin{aligned} leverage_{it} = {} & \alpha_i + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, mk\text{-}bk\ ratio_{it} + \beta_5\, risk_{it} + \beta_6\, tax\ rate_{it} \\ & + \beta_7\, consolidaton_{it} + \beta_8\, family\ control_{it} + \beta_9\, votes_{it} + \beta_{10}\, votes/capital_{it} \\ & + \beta_{11}\, fam\ cont{*}majority_{it} + \beta_{12}\, dual\ shares\ \&\ ADRs_{it} + \beta_{13}\, CPOs_{it} \\ & + \beta_{14}\, outside\ block_{it} + \varepsilon_{it} \end{aligned}$$

where *leverage* is any of the six ratios (total debt, long-term debt or short-term debt valued at either market price or book value) for the firm *i* at time *t.*

In order to control for the industry sector effects I will allow γ to denote the sum of all the dummy variables controlling for them, so that the previous model can be re-written as:

$$\begin{aligned} leverage_{it} = {} & \alpha_i + \beta_1\, size_{it} + \beta_2\, tangibility_{it} + \beta_3\, roa_{it} + \beta_4\, mk\text{-}bk\ ratio_{it} + \beta_5\, risk_{it} + \beta_6\, tax\ rate_{it} \\ & + \beta_7\, consolidaton_{it} + \beta_8\, family\ control_{it} + \beta_9\, votes_{it} + \beta_{10}\, votes/capital_{it} \\ & + \beta_{11}\, fam\ cont{*}majority_{it} + \beta_{12}\, dual\ shares\ \&\ ADRs_{it} + \beta_{13}\, CPOs_{it} \\ & + \beta_{14}\, outside\ block_{it} + \Sigma\, \gamma\ dummy\ sectors_{it} + \varepsilon_{it} \end{aligned}$$

In order to identify whether a FE model or a RE model is most appropriate for modelling this theoretical conceptualisation, the Hausman and the Hausman and Sigmamore tests were carried out. In this case, the aforementioned tests revealed that the RE estimator is more accurate for all leverage ratios at book and market values.

Finally, the results from the previous regressions were contrasted with those results from the regressions but with a robustness test. The statistical software used to estimate these equations is STATA 10.

Table 5.13 Correlation Table

	total book debt	long-term book debt	short-term book debt	total mkt debt	long-term mkt debt	short-term mkt debt	size	Tangi-bility	ROA	mk-bk ratio	eff tax rate	risk	Consoli-dation	family control	votes	votes per capital	fam com x majority	dual shares & ADRs	CPOs	outside block	consumer disc serv	industrial	material	telecomm
total book debt	1																							
long-term bk debt	**0.9013***	1																						
short-term bk debt	**0.8444***	**0.5609***	1																					
total mkt debt	**0.6354***	**0.5662***	**0.5490***	1																				
long-term mkt debt	**0.5745***	**0.6411***	**0.3595***	**0.9416***	1																			
short-term mkt debt	**0.5693***	**0.3848***	**0.6802***	**0.9175***	**0.7881***	1																		
size	**0.3218***	**0.2226***	**-0.3264***	-0.0099	-0.0446	0.0307	1																	
tangibility	**-0.1805***	-0.1048	**-0.2875***	0.0981	**-0.1684***	0.0081	**0.2007***	1																
ROA	**0.1516***	-0.0651	**0.1984***	**-0.5138***	**-0.4394***	**-0.5209***	**0.1809***	0.0696	1															
mk-bk ratio	**0.2499***	**0.2831***	**0.1706***	**-0.4516***	**-0.4092***	**-0.4141***	**0.1819***	**-0.2826***	**0.3397***	1														
eff tax rate	0.1028	**0.1216***	0.0994	**-0.1455***	**-0.1630***	**-0.1405***	0.0809	**0.1172***	-0.0055	-0.1059	1													
risk	-0.0853	-0.1109	-0.0374	**-0.1450***	**-0.1744***	**-0.1256***	-0.0133	-0.043	0.0196	0.0535	0.0774	1												
consolidation	-0.0478	-0.0791	0.0092	**0.2579***	**0.2764***	**0.2195***	**0.1921***	**0.1175***	0.082	**0.1894***	0.0777	**0.4083***	1											
family control	0.0999	-0.0146	**0.2251***	**0.2559***	**0.1579***	**0.3218***	**0.1269***	-0.102	**-0.3078***	**-0.2271***	0.1069	0.0537	0	1										
votes	**0.1703***	**0.1764***	0.0775	0.0113	0.0007	-0.0211	**0.2713***	**0.1794***	0.0101	**0.2767***	**-0.1333***	0.0143	-0.0445	**0.1330***	1									
votes/capital	**0.1490***	**0.1813***	0.0635	-0.0875	-0.0621	-0.0834	**0.2542***	-0.0168	-0.1128	**0.2066***	-0.0862	0.0152	0.0463	**0.1545***	**0.3392***	1								
fam com x majority	**0.1409***	**0.1553***	0.079	-0.0502	-0.0383	-0.0366	**0.2579***	-0.0173	**-0.1550***	**0.1463***	-0.0694	0.0225	0.0472	**0.2751***	**0.3334***	**0.9913***	1							
d-shares & ADRs	**0.1340***	**0.2458***	-0.0146	**-0.2848***	**-0.2121***	**-0.3225***	**0.3485***	-0.0665	0.0923	**0.4735***	-0.1129	-0.0672	-0.0303	-0.0023	**0.3281***	**0.4935***	**0.4558***	1						
CPOs	**0.3462***	**0.3542***	**0.2969***	**0.1777***	**0.2013***	**0.2131***	**0.1653***	-0.1039	**-0.1321***	**0.1221***	**0.1191***	-0.0423	0.03	0.078	**0.2163***	**0.5221***	**0.5158***	**0.1183***	1					
outside block	**-0.2633***	**-0.1721***	**-0.2902***	**-0.1826***	**-0.1291***	**-0.2108***	**0.1281***	0.0199	**-0.1742***	-0.0931	0.0106	-0.0298	0.0104	-0.048	**-0.1306***	-0.1066	-0.1142	0.0892	**-0.2208***	1				
consumer disc serv	**0.1528***	0.0464	**-0.2028***	**0.1174***	0.0266	0.0999	**0.2149***	-0.0389	**-0.1295***	-0.0826	0.0311	**0.1953***	0.0000	**0.3067***	**0.1817***	-0.0861	-0.0457	0.1058	**-0.1727***	**0.2248***	1			
industrial	**0.3076***	**0.3585***	**0.2194***	**0.3383***	**0.3578***	**0.2685***	**0.3455***	**0.2355***	**0.1187***	0.0724	0.0343	-0.0503	0.0000	-0.0155	**0.1349***	**-0.1423***	**-0.1344***	0.0179	-0.1104	**0.3681***	**-0.2872***	1		
material	0.0292	0.0083	0.0958	**0.1727***	**0.1586***	**0.1974***	**-0.2609***	**-0.4869***	**0.2554***	**-0.1967***	-0.0981	-0.0572	0.0000	**-0.1195***	**0.2851***	-0.0303	-0.0105	-0.0795	**0.1513***	-0.1023	**-0.2303***	**-0.3836***	1	
telecomm	-0.0804	0.0226	**-0.1789***	0.094	**0.1756***	0.064	**-0.1254***	**-0.2979***	-0.0032	-0.1089	0.0658	-0.037	0.0000	**-0.2328***	0.0996	**0.2965***	**0.2717***	-0.1031	**0.1472***	**-0.1298***	**-0.2114***	**-0.3521***	**-0.2824***	1

Table 5.14 Regression Results –Ownership and Control Interaction–

This table shows the correlation of the total debt ratio, long-term debt ratio, and short-term debt ratio at book and market values. All of these measures act as the dependent variable, whilst the seven company factors proposed for capital structure are: size, tangibility, profitability, mk-bk ratio, risk, effective tax rate and consolidation. The six factors proposed for ownership and control are: family control, votes, (votes/capital), dual shares & ADRs, CPOs, outside block, and the interaction between family control and votes.

The leverage measures are calculated as follows: total book-debt equals total liabilities divided by total liabilities and net worth. Long-term book-debt is total liabilities less current liabilities divided by total liabilities less current liabilities plus net worth, and short-term book debt is current liabilities divided by total liabilities and net worth. The difference between book-ratios and market-ratios is that market-ratios use the average of equity market value instead of that of net worth.

The seven regressors for capital structure are computed as follows: size is the natural logarithm of sales divided by 100; tangibility is the ratio of the book value of real estate and plant divided total assets; profitability to is the earnings before interest and taxes (EBIT) divided by total assets; market-to-book ratio is the equity market value divided by net worth; business risk is the variability of return on assets; tax rate is the percentage from earning before and earnings after tax; and consolidation is a binary variable which took zero as a value when the company accounts were not consolidated and one when they were.

The six regressors for ownership and control are computed as follows: family control binary variable that takes the value of one when a family holds fifty per cent or more of the total voting rights of the company stock; votes controlling shareholders voting rights divided by total outstanding shares; (votes/capital) votes variable divided by the capital variable; dual shares & ADRs total amount of dual-class shares and ADRs divided by total outstanding shares; CPOs f total amount of CPOs divided by total outstanding shares; and outside block is the percentage of the voting-rights granted by the shares held by the outside-block with respect to the total outstanding shares

All the variables (regressand and regressors) correspond to the period 2000 to 2007. Standard errors are presented in parenthesis.

Table 5.14 Regression Results(Cont.) –Ownership and Control Interaction–

	Total book debt				*Long-term book debt*				*Short term book debt*			
	RE	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**
size	**3.0102****	**3.0102***	**3.6108****	**3.6108****	1.5661	1.5661	2.0406	2.0406	**3.2976*****	**3.2976****	**4.0827*****	**4.0827****
	(1.3910)	(1.7986)	(1.4606)	(1.6946)	(1.4825)	(1.9113)	(1.5401)	(1.6542)	(1.2368)	(1.5365)	(1.3661)	(1.6487)
tangibility	0.0280	0.0280	0.0608	0.0608	0.0851	0.0851	**0.1202***	0.1202	-0.0340	-0.0340	0.0052	0.0052
	(0.0646)	(0.0953)	(0.0675)	(0.0887)	(0.0696)	(0.0858)	(0.0720)	(0.0790)	(0.0612)	(0.1027)	(0.0662)	(0.0992)
ROA	**-0.6632*****	**-0.6632*****	**-0.6719*****	**-0.6719*****	**-0.5656*****	**-0.5656*****	**-0.5728*****	**-0.5728*****	**-0.5161*****	**-0.5161*****	**-0.5253*****	**-0.5253*****
	(0.0996)	(0.0787)	(0.0997)	(0.0773)	(0.1101)	(0.1336)	(0.1096)	(0.1294)	(0.1081)	(0.1306)	(0.1085)	(0.1349)
mk-bk ratio	**0.0120*****	**0.0120*****	**0.0119*****	**0.0119*****	**0.0098*****	**0.0098*****	**0.0097*****	**0.0097*****	**0.0192*****	**0.0192*****	**0.0194*****	**0.0194*****
	(0.0033)	(0.0027)	(0.0033)	(0.0024)	(0.0037)	(0.0028)	(0.0037)	(0.0026)	(0.0036)	(0.0040)	(0.0036)	(0.0038)
risk	-1.5774	-1.5774	-1.7068	-1.7068	0.7760	0.7760	0.6476	0.6476	**-2.8706***	**-2.8706****	**-3.0161***	**-3.0161****
	(1.4662)	(1.5425)	(1.4723)	(1.5516)	(1.6248)	(1.6938)	(1.6240)	(1.7065)	(1.6189)	(1.4496)	(1.6300)	(1.4195)
eff tax rate	0.0083	0.0083	0.0092	0.0092	**0.0224***	**0.0224****	**0.0235****	**0.0235****	-0.0129	-0.0129	-0.0114	-0.0114
	(0.0108)	(0.0066)	(0.0108)	(0.0068)	(0.0119)	(0.0092)	(0.0119)	(0.0092)	(0.0118)	(0.0125)	(0.0119)	(0.0128)
consolidation	**-0.0283*****	**-0.0283*****	**-0.0301*****	**-0.0301*****	**-0.0332*****	**-0.0332****	**-0.0348*****	**-0.0348****	**-0.0177***	**-0.0177***	**-0.0196***	**-0.0196***
	(0.0098)	(0.0106)	(0.0098)	(0.0102)	(0.0108)	(0.0142)	(0.0107)	(0.0136)	(0.0104)	(0.0107)	(0.0105)	(0.0106)
family control	**0.1811****	**0.1811****	0.1375	0.1375	0.0807	0.0807	0.0374	0.0374	**0.2298*****	**0.2298*****	**0.1871****	**0.1871****
	(0.0887)	(0.0893)	(0.0900)	(0.0917)	(0.0946)	(0.0710)	(0.0950)	(0.0865)	(0.0819)	(0.0846)	(0.0870)	(0.0857)
votes	-0.0221	-0.0221	-0.0137	-0.0137	0.0003	0.0003	0.0064	0.0064	-0.0660	-0.0660	-0.0456	-0.0456
	(0.0471)	(0.0529)	(0.0491)	(0.0573)	(0.0516)	(0.0564)	(0.0534)	(0.0626)	(0.0483)	(0.0511)	(0.0515)	(0.0558)
votes/capital	**0.1391****	**0.1391*****	**0.1030***	**0.1030****	0.0867	**0.0867****	0.0403	0.0403	**0.1346****	**0.1346****	0.1087	0.1087
	(0.0605)	(0.0516)	(0.0625)	(0.0462)	(0.0663)	(0.0371)	(0.0685)	(0.0378)	(0.0622)	(0.0669)	(0.0671)	(0.0672)
fam com x majority	**-0.1388****	**-0.1388*****	**-0.1028***	**-0.1028****	-0.0865	**-0.0865****	-0.0403	-0.0403	**-0.1366****	**-0.1366****	**-0.1111***	**-0.1111***
	(0.0602)	(0.0512)	(0.0624)	(0.0460)	(0.0659)	(0.0374)	(0.0683)	(0.0380)	(0.0618)	(0.0657)	(0.0669)	(0.0664)
dual shares & ADRs	-0.0778	-0.0778	-0.0899	-0.0899	0.1674	0.1674	0.1389	0.1389	**-0.1972****	-0.1972	**-0.1973****	-0.1973
	(0.1068)	(0.1559)	(0.1049)	(0.1458)	(0.1147)	(0.1074)	(0.1109)	(0.1103)	(0.0989)	(0.1792)	(0.0990)	(0.1620)
CPOs	-0.1474	-0.1474	-0.1344	-0.1344	0.0413	0.0413	0.0508	0.0508	**-0.1800***	-0.1800	**-0.1784***	-0.1784
	(0.1056)	(0.1038)	(0.1050)	(0.1100)	(0.1151)	(0.0880)	(0.1133)	(0.0995)	(0.1055)	(0.1262)	(0.1067)	(0.1299)
outside block	-0.1382	-0.1382	-0.0943	-0.0943	-0.0342	-0.0342	0.0219	0.0219	**-0.2356****	**-0.2356***	-0.1758	-0.1758
	(0.1205)	(0.1373)	(0.1203)	(0.1356)	(0.1299)	(0.1420)	(0.1282)	(0.1522)	(0.1129)	(0.1223)	(0.1164)	(0.1119)
consumer disc serv			-0.1037	-0.1037			-0.1588	-0.1588			0.0027	0.0027
			(0.1191)	(0.0758)			(0.1199)	(0.1066)			(0.0976)	(0.0803)
industrial			**-0.2550*****	**-0.2550*****			**-0.3038*****	**-0.3038*****			-0.1028	**-0.1028****
			(0.0981)	(0.0568)			(0.0986)	(0.0909)			(0.0800)	(0.0434)
material			-0.1313	**-0.1313***			-0.1654	**-0.1654***			-0.0044	-0.0044
			(0.1100)	(0.0739)			(0.1113)	(0.0974)			(0.0916)	(0.0580)
telecomm			-0.1691	**-0.1691****			**-0.1900***	**-0.1900****			-0.0493	-0.0493
			(0.1063)	(0.0668)			(0.1074)	(0.0927)			(0.0883)	(0.0648)
_cons	-0.1005	-0.1005	-0.0132	-0.0132	-0.0265	-0.0265	0.1235	0.1235	-0.2963	-0.2963	-0.3765	-0.3765
	(0.2497)	(0.3439)	(0.3031)	(0.3464)	(0.2655)	(0.3362)	(0.3205)	(0.3344)	(0.2197)	(0.2887)	(0.2881)	(0.3293)
N	204	204	204	204	204	204	204	204	204	204	204	204
r2												
r2_o	0.2843	0.2843	0.4244	0.4244	0.2028	0.2028	0.4262	0.4262	0.3292	0.3292	0.4002	0.4002
r2_b	0.2930	0.2930	0.4365	0.4365	0.1993	0.1993	0.4444	0.4444	0.3387	0.3387	0.4188	0.4188
R2_w												
sigma_u	0.1472	0.1472	0.1335	0.1335	0.1509	0.1509	0.1339	0.1339	0.1018	0.1018	0.0986	0.0986
sigma_e	0.0443	0.0443	0.0443	0.0443	0.0496	0.0496	0.0496	0.0496	0.0477	0.0477	0.0477	0.0477
rho	0.9170	0.9170	0.9009	0.9009	0.9025	0.9025	0.8793	0.8793	0.8203	0.8203	0.8106	0.8106
theta	0.8781	0.8781	0.8658	0.8658	0.8670	0.8670	0.8505	0.8505	0.8123	0.8123	0.8064	0.8064

Standard errors in parentheses

**** p<0.10 ** p<0.05 *** p<0.01***

Table 5.14 Regression Results (Cont.) –Ownership and Control Interaction–

	Total market debt				*Long term market debt*				*Short market debt*			
	RE	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**	**RE**	**RE, vce**
size	0.6057	0.6057	1.2904	1.2904	-0.3863	-0.3863	0.3001	0.3001	1.9841	1.9841	2.6616	2.6616
	(1.8552)	(2.4720)	(1.9743)	(2.1661)	(1.9067)	(2.6498)	(1.9801)	(2.3063)	(1.5152)	(1.8510)	(1.6946)	(1.8549)
tangibility	0.1391	0.1391	**0.1990****	**0.1990****	**0.2529*****	**0.2529****	**0.3137*****	**0.3137*****	0.1158	0.1158	**0.1662***	0.1662
	(0.0931)	(0.1043)	(0.0977)	(0.0997)	(0.0950)	(0.1098)	(0.0980)	(0.1016)	(0.0815)	(0.1179)	(0.0883)	(0.1169)
ROA	**-1.3499*****	**-1.3499*****	**-1.3731*****	**-1.3731*****	**-1.2227*****	**-1.2227*****	**-1.2442*****	**-1.2442*****	**-1.2593*****	**-1.2593*****	**-1.2784*****	**-1.2784*****
	(0.1696)	(0.1680)	(0.1677)	(0.1658)	(0.1704)	(0.1716)	(0.1682)	(0.1667)	(0.1696)	(0.1615)	(0.1684)	(0.1621)
mk-bk ratio	**-0.0161*****	-0.0161	**-0.0158*****	-0.0158	**-0.0129****	-0.0129	**-0.0124****	-0.0124	-0.0064	-0.0064	-0.0048	-0.0048
	(0.0056)	(0.0141)	(0.0056)	(0.0133)	(0.0057)	(0.0109)	(0.0056)	(0.0099)	(0.0056)	(0.0125)	(0.0056)	(0.0116)
risk	-2.2356	-2.2356	-2.3557	-2.3557	-1.5618	-1.5618	-1.6541	-1.6541	-4.3275	**-4.3275***	-4.2741	**-4.2741***
	(2.5537)	(2.6341)	(2.5436)	(2.6684)	(2.5592)	(2.3865)	(2.5508)	(2.4339)	(2.6381)	(2.5570)	(2.6297)	(2.5747)
eff tax rate	-0.0043	-0.0043	-0.0019	-0.0019	-0.0015	-0.0015	0.0015	0.0015	**-0.0371***	-0.0371	**-0.0343***	-0.0343
	(0.0186)	(0.0166)	(0.0185)	(0.0169)	(0.0187)	(0.0156)	(0.0186)	(0.0160)	(0.0191)	(0.0300)	(0.0190)	(0.0294)
consolidation	**-0.0775*****	**-0.0775*****	**-0.0800*****	**-0.0800*****	**-0.0729*****	**-0.0729*****	**-0.0757*****	**-0.0757*****	**-0.0578*****	**-0.0578*****	**-0.0611*****	**-0.0611*****
	(0.0163)	(0.0167)	(0.0161)	(0.0155)	(0.0164)	(0.0202)	(0.0162)	(0.0190)	(0.0162)	(0.0160)	(0.0162)	(0.0147)
family control	0.1376	0.1376	0.0519	0.0519	0.0117	0.0117	-0.0582	-0.0582	**0.2137***	**0.2137***	0.1473	0.1473
	(0.1248)	(0.1167)	(0.1298)	(0.1270)	(0.1273)	(0.0920)	(0.1302)	(0.1159)	(0.1104)	(0.1092)	(0.1221)	(0.1191)
votes	0.0643	0.0643	0.0726	0.0726	0.0543	0.0543	0.0594	0.0594	-0.0028	-0.0028	0.0149	0.0149
	(0.0746)	(0.0928)	(0.0782)	(0.1005)	(0.0755)	(0.0850)	(0.0784)	(0.0948)	(0.0694)	(0.0706)	(0.0745)	(0.0820)
votes/capital	0.0759	0.0759	-0.0166	-0.0166	-0.0020	-0.0020	-0.0896	-0.0896	0.1170	0.1170	0.0444	0.0444
	(0.0962)	(0.0805)	(0.1031)	(0.0924)	(0.0974)	(0.0512)	(0.1034)	(0.0732)	(0.0892)	(0.0926)	(0.1015)	(0.0952)
fam com x majority	-0.0757	-0.0757	0.0160	0.0160	0.0018	0.0018	0.0882	0.0882	-0.1178	-0.1178	-0.0466	-0.0466
	(0.0955)	(0.0788)	(0.1027)	(0.0912)	(0.0967)	(0.0513)	(0.1030)	(0.0731)	(0.0883)	(0.0903)	(0.1010)	(0.0939)
dual shares & ADRs	-0.2180	-0.2180	**-0.2488***	-0.2488	-0.0061	-0.0061	-0.0518	-0.0518	**-0.3025****	-0.3025	**-0.3070****	**-0.3070***
	(0.1496)	(0.2057)	(0.1439)	(0.1744)	(0.1531)	(0.1639)	(0.1443)	(0.1480)	(0.1266)	(0.1859)	(0.1252)	(0.1608)
CPOs	-0.0906	-0.0906	-0.0760	-0.0760	-0.0100	-0.0100	0.0041	0.0041	-0.0674	-0.0674	-0.0783	-0.0783
	(0.1622)	(0.1522)	(0.1594)	(0.1536)	(0.1647)	(0.1394)	(0.1598)	(0.1468)	(0.1457)	(0.1681)	(0.1466)	(0.1768)
outside block	-0.1920	-0.1920	-0.0825	-0.0825	-0.0998	-0.0998	0.0124	0.0124	**-0.2397***	**-0.2397***	-0.1416	-0.1416
	(0.1706)	(0.1761)	(0.1701)	(0.1952)	(0.1747)	(0.1685)	(0.1706)	(0.1983)	(0.1418)	(0.1229)	(0.1484)	(0.1423)
consumer disc serv			-0.2182	**-0.2182****			**-0.2570***	**-0.2570****			-0.1195	-0.1195
			(0.1361)	(0.0934)			(0.1365)	(0.1039)			(0.1109)	(0.0875)
industrial			**-0.3340*****	**-0.3340*****			**-0.3584*****	**-0.3584*****			**-0.1831****	**-0.1831*****
			(0.1115)	(0.0598)			(0.1119)	(0.0848)			(0.0912)	(0.0512)
material			-0.1712	**-0.1712****			-0.1712	**-0.1712***			-0.0522	-0.0522
			(0.1288)	(0.0760)			(0.1291)	(0.0923)			(0.1068)	(0.0632)
telecomm			**-0.2059***	**-0.2059****			**-0.2060***	**-0.2060***			-0.0764	-0.0764
			(0.1240)	(0.0923)			(0.1244)	(0.1082)			(0.1028)	(0.0922)
_cons	0.3782	0.3782	0.5480	0.5480	0.4347	0.4347	0.6083	0.6083	-0.0101	-0.0101	0.0155	0.0155
	(0.3290)	(0.4640)	(0.4211)	(0.4617)	(0.3384)	(0.4598)	(0.4223)	(0.4593)	(0.2673)	(0.3688)	(0.3729)	(0.4061)
N	204	204	204	204	204	204	204	204	204	204	204	204
r2												
r2_o	0.4387	0.4387	0.5828	0.5828	0.3064	0.3064	0.5110	0.5110	0.4623	0.4623	0.5322	0.5322
r2_b	0.4058	0.4058	0.5899	0.5899	0.2299	0.2299	0.4990	0.4990	0.4694	0.4694	0.5598	0.5598
R2_w												
sigma_u	0.1511	0.1511	0.1381	0.1381	0.1588	0.1588	0.1388	0.1388	0.1006	0.1006	0.0982	0.0982
sigma_e	0.0775	0.0775	0.0775	0.0775	0.0778	0.0778	0.0778	0.0778	0.0770	0.0770	0.0770	0.0770
rho	0.7919	0.7919	0.7608	0.7608	0.8064	0.8064	0.7608	0.7608	0.6307	0.6307	0.6195	0.6195
theta	0.7952	0.7952	0.7768	0.7768	0.8039	0.8039	0.7769	0.7769	0.7018	0.7018	0.6952	0.6952

Standard errors in parentheses
**** p<0.10 ** p<0.05 *** p<0.01***

5.3.4 Discussion of the Results

The results of the proposed general model of Capital Structure for the Mexican publicly traded companies are displayed in table 4.10. This model has provided evidence that the financing policies of emerging markets are also framed by the main factors influencing the financing policies of developed markets.

Table 4.10 shows that the variables profitability and liquidity are strongly negatively correlated to all kinds of debt. This could mean that solvent and profitable Mexican companies do tend not to engage in debt practices. This evidence supports Myers' (1984) Pecking Order theory arguments, and possibly demonstrates that for Mexican companies the agency costs of debt and equity are more expensive than the cost of having free-cash flows. This last proposition, although unusual, could apply if Mexican companies also had large/majority shareholders acting as CEOs at the same time, which is the case. Therefore to have more evidence on this regard section 5.3.2.2 will study the interaction between ownership and capital structure.

The behaviour of the variables asset tangibility and company size might suggest that in this model they are acting as complements; that is to say, that these variables are picking up the same effects although their calculation meant controlling for different factors. Size and tangibility are negatively correlated to debt, but only one of them gets the strong correlated coefficient at the time. According to the Static Trade-Off model, Mexican companies are reflecting the wrong sign as they should be expected to engage in higher debt due to their asset capacity as collateral. The market-to-book ratio variable is strongly negatively correlated to all terms of debt, when calculated at market value, and for long-term debt at book values. This variable also suggests that the agency costs of debt are rather expensive so that profitable firms with growth opportunities would have preferred not to achieve their optimal level of development because of the possibility of financial distress. The business risk variable is strongly positively correlated to debt at market value. This result is also opposite to the theoretical expected according to the Static Trade-Off model and the agency cost framework. One should expect that the riskier the company, the less in debt they would like to be in. This is because high levels of debt might only worsen their

probabilities of default. However, it could be the case that controlling investors would be with the minimum amount of shares needed to maintain their control, so that the agency costs of debt might be less expensive than losing the benefits from controlling the company. Finally, the behaviour of the two variables proposed by this researcher is the following. Consolidation was strongly negatively correlated to all market value debt, and only strongly negatively correlated to long-term debt at book values. I expected that trend since consolidated accountancy offers a more realistic view of the economic situation of the companies. In addition, since business groups are one of the most common organisational structures of Mexican companies, it seems reasonable that these large networks will have higher aggregated levels of debt and less collateral left free, making creditors willing to charge them premium tax rates for their loans. Finally, there was no significant econometric or economic correlation with the tax variable.

Bearing in mind that the corporate and financial data used to estimate the general model belongs to the largest Mexican publicly traded companies, this researcher is aware that these results might only apply to companies similar to the sample. Nonetheless, some general conclusions can be drawn since there are particularities of the corporate practices, not only regarding the financial-economic-politico environment of the country per se, but also regarding factors such as culture in the social and behavioural sense.

Finally, it could be said that this investigation has documented, to a certain extent, that country and firm level factors are as important, or even more so than the classic capital structure determinants in their ultimate effect to the financing policies of Mexican publicly traded companies.

These results have left an open avenue for further research, in areas such as the effects of time (via a dynamic panel model) and the empirical evidence of the behavioural side of finance.

Chapter 6

Conclusion

It is now acknowledged that there are different ownership patterns around the world (e.g. disperse-held ownership, concentrated ownership and controlling ownership) and that these ownership patterns, along with the financial structure of companies, play a very significant role in the creation (dilution) of the company value. Further, previous research has identified that corporate financing decisions are drastically influenced by concentrated ownerships, and that they are more complexly influenced when there is separation of ownership and control.

A worldwide picture of the ownership structure of companies reveals that many large companies have controlling shareholders, except for those companies based in countries with high levels of minority shareholders protection, which are more widely held among investors. Families or the State typically controlled the former companies, participating actively in the management of these companies, and typically having control over companies in excess of the threshold of their investments (La Porta *et al*. 1999).

Additionally, existing evidence on capital structure documents that capital financial decisions are affected by the same determinants in developed and emerging countries. However, in emerging countries some of these determinants often present unexpected behaviour/trends (Booth et al. 2001, Céspedes *et al*. 2010 and Glen and Singh 2004).

This thesis aimed to investigate the interaction between ownership structure and corporate financing decisions in emerging countries. In doing so, this thesis developed two theoretical models in chapters 3 and 4 respectively. The first model assessed important factors inducing the separation of ownership and control in ownership structures in emerging countries. The second model analysed the relationship between

empathy and economic gains, to identify important factors promoting the formation of business groups in emerging markets. The empirical investigation in chapter 5 comprises two sets of analyses. The first part examined the effects of well-known determinants of capital structure on debt. The second part of this investigation analysed the effects of control and ownership in financing policies of emerging markets. Thus, the thesis not only contributes in terms of theory to the on-going research into ownership and control and business groups, but its empirical findings also contribute to the research of capital structure in emerging markets.

The theoretical model in chapter 3 demonstrated that: high-risk aversion induces an incumbent manager to wish to minimise his/her equity stake; that high private benefits imply that the incumbent would wish to retain control, therefore, he/she wishes to maximise his/her control rights while minimising his/her equity stake; a social planer sympathetic to the incumbent will facilitate the no contestable structure by allowing him/her to issue non-voting equity; and investor irrationality makes the no contestable structure even easier to achieve.

These findings agree with previous arguments regarding the features of emerging markets and controlling ownership structures. For example, Grossman and Hart (1988) identified that a voting security structure can be used as a mechanism for shifting corporate control. Further, Harris and Raviv (1988) argued that governance rules also affect firm value because they influence the proportion of private benefits to be extracted from the winner contestant in a takeover bidding process. Additionally, these findings also support the origin of law argument which claims that civil-law countries might be prone to having controlling ownership structures due to their poor/weak legal and regulatory systems (La Porta *et al*. 1999). Further, Bebchuck (1999) argued that controlling shareholding structures should be more common in countries with large private benefits of control, whereas dispersed ownership structures should be more common in countries with small private benefits.

However, it has recently been proposed that pyramidal business groups may be the organisational form of companies endowed with lax investor and creditor rights' protection to overcome the inefficiencies of markets and their supporting institutions (Khanna and Yafeh 2007, Langlois 2009, Colpan and Hikino 2010, among others).

Hence, acknowledging this new evidence, a new theoretical model assessing the factors promoting the formation of business groups and their behaviour towards economy was developed in chapter 4.

The theoretical model presented in chapter 4 proved that: (1) empathy '*generation'* has a cost; (2) empathy enhances the payoff of affiliated companies; (3) there is a greater likelihood of networks forming when countries face a higher probability of economic turmoil; and (4) if the economy is in a good state, there is no payoff-enhancement from forming a network since firms are already able to create high incomes. Hence, this model argued that the firms' network-forming decision is affected by: (1) the cost of forming the network; (2) the probability of the bad state occurring; and (3) the level of empathy-enhancement in the bad economic state.

These results support the view that business groups are structural organisations that can help to ameliorate the inefficiencies in markets and institutions. Further, these results agree with the findings of Castañeda's (2007) model regarding the preference of business groups to support the network-formation by acting as a business group instead of individual entities when a situation of financial disarray occurs. Moreover, these results are also in line with Khanna and Yafeh's (2007) argument regarding the *changing nature* of business groups according to the environment where they operate, and with Schneider's (2009) rationale regarding the adaptation capacity of business groups and institutions to obtain the best for each other and to coexist at the maximum gain for all parties.

In conclusion, these two theoretical models have demonstrated the strong influence of economic, legal, cultural and behavioural factors in corporate finance and governance practices in emerging markets. Further, the separation of ownership and control model proved that ownership structure affects the financial policies of companies, as is reflected in the valuation of companies and the generation of investors' wealth. Further, the business group model demonstrated the wealth-enhancing side of these groups, despite a wrongly-stereotyped organisational structure. Finally, in terms of the limitations of these models, the model of ownership and control was framed considering an all-equity company; therefore, this model would benefit from changing this scenario to one with a debt and equity mix. Secondly, this model also may benefit

from developing the analysis to consider other defensive control mechanisms, such as multi-classes of voting equity, stock pyramids, rings, and anti-takeover amendments.

The empirical investigation in chapter 5 was carried out in two stages. The first part investigated the effects of the determinants of capital structure. To this end, a dataset of 78 Mexican publicly traded companies observed during an 8-year period was used. The second part of the investigation assessed the interaction of ownership and control in the corporate financing structure of 35 Mexican publicly traded companies over a 6-year period. The reason for the use of two different dataset is that testing of ownership and control will always require very detailed data, which at present is not publicly available in Mexico, so this second dataset was '*hand-made'*.

The results of the capital structure analysis revealed that: from the eight control variables included (i.e. size, tangibility, ROA, market-to-book ratio, business risk, effective tax rate, liquidity and consolidation) ROA and liquidity were always strongly negatively correlated to all levels of debt, valued at either book or market values. These results suggested that the sampled companies favoured internal financing and that firms with more liquid assets tended to avoid the costs of debts. These arguments support the Myers' (1984) Pecking-Order theory. Market-to-book value variable (or growth opportunities) was negative in general and strongly negatively correlated when valued at market value. This variable also suggested that the agency costs of debt were rather expensive, so that profitable firms with growth opportunities preferred not to achieve their optimal level of development because of the possibility of financial distress. Consolidation, one the suggested variables, showed a negative sign and was strongly correlated when valued at market prices. I expected this variable to be negative since first, most of the sample companies are organised as business groups. Secondly, consolidated accounting displays the real amount of debt that the whole group already has, so the level of debt they could be engage in should be reduced.

However, an unexpected outcome was the business risk variable. Business risk showed a positive correlation when valued at market price. This result may suggest that companies may not really be affected in cases of financial distress or that they have a way to transfer their financial distress costs to others. It is worth noticing that all these explanations respond to the expected or *'standard'* behaviour of the

determinants of capital structure without giving any consideration to country particulars. Hence, since this evidence is from an emerging market, one should account for higher levels of debt because of the illiquidity of emerging financial markets. On the other, one should also expect larger information asymmetries and longer and more costly processes of bankruptcy and financial distress as result of the inefficiency of their legal and enforcement systems.

Finally, the variable business risk was an example of the particularities of the country to which this empirical evidence belongs: *Mexico*. As noted by Céspedes *et al*. (2010), in Mexico there is a requirement to carry inflation adjustment in corporate financial statements. This accounting practice has several effects such as turning a tax shield negative or market and book values smooth.

In the second stage of this analysis, the effects of ownership and control in financial policies were studied. In this regard, Rajan and Zingales (1995) and Céspedes *et al*. (2010) contend that the effect of ownership concentration on capital structure is far from obvious. On the one hand, the presence of large shareholders on the BOD should reduce the extent of agency costs between managers and shareholders and facilitate equity issuances. Further, majority shareholders' undiversified portfolio may increase their aversion to debt (Hagelin *et al*. 2006 and Céspedes *et al*. 2010). On the other hand, if some of the shareholders are banks, they may force the firms to borrow from them, or if bond markets are weak, investors might not be able to get financing from them.

The seven control variables used in this part of the analysis were: family control, votes, discrepancy of capital and votes, dual shares & ADRs, CPOs, outside block, and interaction between family control and votes. The results of the study are: as expected, short-term debt picked/demonstrated the most effects when valued at book value. This supported the argument that *trade-credit* is an important source of financing in emerging markets (Booth *et al*. 2001 and Glen and Singh, 2004). Families are controlling shareholders of Mexican publicly listed companies. When families are large shareholders, they favoured debt financing maybe because they are afraid of losing control and/or the private benefits. When families are the majority controlling shareholder they preferred issue shares. According to Hagelin et al. (2006) this may be

considered as a diversification mechanism. Since these families know they cannot lose control, they decide to issue dual-shares and so diversify their portfolio. There is also some evidence pointing out that when there was an outside block, debt issuance was discouraged, which supported the argument regarding the monitoring service that outside blocks provide for minority investors and themselves.

In summary, this empirical study documented that country factors and institutions are crucial when selecting the capital and ownership corporate structures. Further, ownership and control does have complex and unpredicted effects in the financing policies of companies, however, some patterns of behaviour have started to arise.

One limitation of this capital structure analysis was that these results were not tested with a dynamic technique. Hence, to test the effects of time in these results and to look for a target level of debt may be an important contribution to future research. In the case of the analysis of the interaction between ownership and control and financial policies, to gather more data in order to have more observations would be also an important improvement to the present study.

Finally, returning to the argument about Mexico and its trend of economic and political development, it is important to recall that Mexico is an emerging economy that is in the process of seeking the implementation of policies that help its economy to achieve long-term economic development. Further, the need for Mexico to attain a self-sustainable capital market is stressed due to its level of integration into the global economy, which has intensified the competition between companies for financing.

To reach this end, evidence has demonstrated that strong legal investor and creditor protection has proved to be a key factor influencing the level of development of financial markets. Taking into account the agency costs' model under the legal approach, it has been suggested that the degree of separation between ownership and control affects the level of access to finance (Chong *et al*. 2009). This is so because the stock traded represents both the cash-flow and the voting rights endowed to the financial instrument traded. In the light of this situation, Mexico has undergone a series of policy-reform processes to achieve macroeconomic stability over the last decade and has now started the institution-building process. The policy reforms

focusing on the institution-building processes include the development of financial institutions, the development of the legal infrastructure supporting business, and the creation of regulatory mechanisms that ought to ensure the best corporate practices.

Bibliography

Altman, E., 1984. A Further Empirical Investigation of the Bankruptcy Cost Question. *Journal of Finance,* September, pp. 1067-1089.

Anderson, R. and Reeb, D., 2003. Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance,* 58 (3), pp. 1301-1328.

Babatz Torres, G., 1997. *Ownership Structure, Capital Structure, and Investment in Emerging Markets: The Case of Mexico*. Thesis (Ph D). Harvard University, Cambridge, MA.

Baker, M. and Wurgler, J., 2002. Market Timing and Capital Structure. *The Journal of Finance*, LVII (1), pp. 1-32.

Barclay, M. J. and Smith, C. W., 2005. The Capital Structure Puzzle: The Evidence Revisited. *Journal of Applied Corporate Finance*, 17 (1), pp. 8-17.

Baxter, N. D., 1967. Leverage, Risk of Ruin and the Cost of Capital. *Journal of Finance,* September, pp. 395-403.

Bebchuck, L. A., 1999. A Rent Protection Theory of Corporate Ownership and Control. *National Bureau of Economic Research* [online], Working Paper 7203, pp.1-37. Available from: http://www.nber.org/papers/w7203 [Accessed 4 June 2006].

Berger, A. N. and Udell, G. F., 1995. Relationship Lending and Lines of Credit in Small Firm Finance. *Journal of Business,* 68 (3), pp. 351-381.

Blázquez, J. and Santiso, J., 2004. Mexico: Is it and Ex-Emerging Market?. *Journal of Latin American Studies,* 36, pp. 297-318.

Bnet, 2010. Consolidation Accounting. *In: BNET The CBS Interactive Business Network* [online]. Available from: http://www.bnet.com/topics/consolidation+accounting [Accessed 4 August 2010].

Bolsa Mexicana de Valores, 2001. *Anuario Financiero de la Bolsa Mexicana de Valores*. Mexico City: Bolsa Mexicana de Valores.

–, 2002. *Anuario Financiero de la Bolsa Mexicana de Valores*. Mexico City: Bolsa Mexicana de Valores.

–, 2003. *Anuario Financiero de la Bolsa Mexicana de Valores*. Mexico City: Bolsa Mexicana de Valores.

–, 2004. *Anuario Financiero de la Bolsa Mexicana de Valores*. Mexico City: Bolsa Mexicana de Valores.

–, 2005. *Anuario Financiero de la Bolsa Mexicana de Valores*. Mexico City: Bolsa Mexicana de Valores.

–, 2006. *Anuario Financiero de la Bolsa Mexicana de Valores*. Mexico City: Bolsa Mexicana de Valores.

–, 2009. *Website* [online]. Mexico: Bolsa Mexicana de Valores. Available from: http://www.bmv.com.mx/ [Accessed on 2009].

–, 2010. *Nuestra historia* [online]. Mexico, Bolsa Mexicana de Valores. Available from: http://www.bmv.com.mx/wb3/wb/BMV/BMV_nuestra_historia [Accessed 26 July 2010].

Booth, L., Aivazian, V., Demirguc-Kunt, A. and Maksimovic, V., 2001. Capital Structures in Developing Countries. *The Journal of Finance*, LVI (1), pp. 87-130.

Boyer, M., Mahenc, P. and Moreaux, M., 2003. Asymmetric Information and Product Differentiation. *Regional Science & Urban Economics*, 33 (1), pp. 93-113.

Branch, B., 2002. The Cost of Bankruptcy: A Review. *International Review of Financial Analysis*, 11 (1), pp. 39-57.

Brander, J. A. and Lewis, T. R., 1986. Oligopoly and Financial Structure: The Limited Liability Effect. *The American Economic Review*, 76 (5)**,** pp. 956-970.

Brooks, C., 2008. *Introductory Econometrics for Finance*. 2nd ed. Cambridge University Press.

Burkart, M. and Panunzi, F., 2006. Agency conflicts, ownership concentration, and legal shareholder protection. *Journal of Financial Intermediation*, 15, pp. 1-31.

Burkart, M., Panunzi, F. and Shleifer, A., 2003. Family Firms. *The Journal of Finance*, LVIII (5), pp. 2167-2201.

Cameron, A. C. and Trivedi, P. K., 2009. *Microeconometrics Using Stata.* Stata Press Publication.

Carvalhal Da Silva, A. L. and Câmara Leal, R. P., 2006. Ownership, Control, Valuation and Performance of Brazilian Corporations. *Journal Corporate Ownership and Control*, 4 (1), pp. 300-308.

Castañeda Ramos, G., 1999. Governance of Large Corporations in Mexico and Productivity Implications. Proceedings of the *International Conference "Gobierno Corporativo: Desafios para América Latina",* September 1999 Santiago de Chile. Chile: Pontificia Universidad Católica de Chile, pp. 1-34.

Castañeda, G., 2002. Internal Capital Markets and Financing Choices of Mexican Firms Before and During the Financial Paralysis of 1995-2000. *Latin American Research Network*, Inter-American Development Bank, pp. 1-34.

Castañeda, G., 2005. Consequences of Firm's Relational Financing in the Aftermath of the 1995 Mexican Banking Crisis. *Journal of Applied Economics*, 8 (1), pp. 53-79.

Castañeda, G., 2007. Business Groups and Internal Capital Markets: the recovery of the Mexican Economy in the Aftermath of the 1995 Crisis. *Industrial and Corporate Change*, 16 (3), pp. 427-454.

Céspedes, J. González, M. and Molina, C. A. 2010. Ownership and Capital Structure in Latin America. *Journal of Business Research*, 63, pp. 248-254.

Chang, C., Lee, A. C. and Lee, C. F., 2009. Determinants of capital structure choice: A structural equation modeling approach. *The Quarterly Review of Economics and Finance*, 49 (2), pp. 197-213.

Chapelle, A., 2005. Separation between Ownership and Control: Where do we stand? *Journal of Corporate Ownership and Control*, 2 (2), pp. 91-100.

Chong, A., Guillen, J. and Lopez-de-Silanes, F., 2009. Corporate governance reform and firm value in Mexico: an empirical assessment. *Journal of Economic Policy Reform*, 12 (3), pp. 163-188.

Chung, K. H. and Pruitt, S. W., 1994. A Simple Approximation of Tobin's q. *Financial Management*, 23 (3), pp. 70-74.

Colpan, A. and Hikino, T., 2010. Foundations of Business Groups: Towards an Integrated Framework. In: A. Colpan, T. Hikino and J. R. Lincoln. The Oxford Handbook of Business Groups. Oxford: Oxford University Press, 2010, pp. 15-66.

Colpan, A., Hikino, T. and Lincoln, J. R., 2010. Introduction. In: A. Colpan, T. Hikino and J. R. Lincoln. The Oxford Handbook of Business Groups. Oxford: Oxford University Press, 2010, pp. 1-11.

Consejo Coordinador Empresarial (CCE), 1999. *Código de Mejores Prácticas Corporativas (CMPC)*. México: Bolsa Mexicana de Valores. Available from: http://www.bmv.com.mx/DOC/CMPC.pdf [Accessed 27 April 2006].

Databank, 2010. Data by Country: Mexico. *In: The World Bank* [online]. Washington, DC: The World Bank Group. Available from: http://data.worldbank.org/country/mexico [Accessed 2 August 2010].

DeAngelo, H. and Masulis, R. W., 1980. Optimal Capital Structure under Corporate and Personal Taxation. *Journal of Financial Economics*, 8, pp. 3-29.

Denis, D. K. and McConnell, J. J., 2003. International Corporate Governance. *European Corporate Governance Institute ECGI* [online], pp. 1-56. Working Papers Series in Finance No. 05/2003. Available from SSRN: http://ssrn.com/abstract=354381 [Accessed 15 July 2006].

EDGAR, 2009. Company filings, annual reports and companies' bylaws. *In: Edgar database* [online]. US Securities and Exchange Commission. Available from: http://www.sec.gov/ edgar.shtml [Accessed on 2009].

Faccio, M., Lang, L. H. P. and Young, L., 2001. Dividends and Expropriation. *The American Economic Review,* 91 (1), pp. 54-78.

Fairchild, R., 2004. Financial Contracting Between Managers and Venture Capitalists: The Role of Value-added Services, Reputation Seeking, and Bargaining Power. *Journal of Financial Research*, XXVII (4), pp. 481-495.

Fairchild, R., 2006. The Effects of Self-interest and Fairness on Entrepreneur/Venture Capitalist Financial Contracting. *Social Science Research Network* [online]. Available from SSRN: http://ssrn.com/abstract=875833 [Accessed 20 November 2006].

Fairchild, R. and Yiyuan, M., 2006. The Strength of the Legal System, Empathetic Cooperation, and the Optimality of Strong or Weak Venture Capital Contracts. *School of Management Working Paper Series: 2006.06,* University of Bath, pp. 1-35.

Fama, E. F. and Jensen, M. C., 1983. Agency problems and residual claims. *Journal of Law and Economics,* 26 (2)**,** pp. 301-325.

Fraser, A. B., 2010. *Fisher Investments on Emerging Markets,* New Jersey: John Wiley & Sons.

Gillan, S. L., 2006. Recent Developments in Corporate Governance: An Overview. *Journal of Corporate Finance*. 12, pp. 381-402.

Gilson, R., 2005. Controlling Shareholders and Corporate Governance: Complicating the comparative taxonomy. *European Corporate Governance Institute ECGI* [online], Law Working Paper No. 49/2005, pp.1-46. Available from SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=%20784744 [Accessed on 2009].

Glen, J. and Singh, A., 2004. Comparing capital structures and rates of return in developed and emerging markets. *Emerging Markets Review,* 5 (2), pp. 161-192.

Graham, J. R., 2000. How Big Are the Tax Benefits of Debt?. *The Journal of Finance,* LV (5), pp. 1901-1941.

Green, R. C. and Hollifield, B., 2003. The Personal-tax Advantages of Equity. *Journal of Financial Economics,* 67 (2), pp. 175-216.

Grossman, S. J. and Hart, O. D., 1988. One Share-One Vote and the Market for Corporate Control. *Journal of Financial Economics,* 20, pp. 175-202.

Guillén, M. F., 2000. Groups in Emerging Economies: A Resource-Based View. *The Academy of Management Journal,* 43 (3) Jun. 2000, pp. 362-380.

Hagelin, N., Holmén. M., and Pramborg, B., 2006. Family ownership, dual-class shares, and risk management. *Global Finance Journal,* 16, pp. 283-301.

Harris, M. and Raviv, A., 1988. Corporate Governance: Voting Rights and Majority Rules. *Journal of Financial Economics,* 20, pp. 203-235.

Harris, M and Raviv, A., 1991. The Theory of Capital Structure. *The Journal of Finance,* 46 (1), pp. 297-355.

Hasan, A. and Jinnah, M. A., 2009. Impact of Ownership Structure and Corporate Governance on Capital Structure of Pakistani Listed Companies. *International Journal of Business Management,* 4 (2), pp. 50-57.

Hatzinikolaou, D., Katsimbris, G.M., and Noulas, A.G., 2002. Inflation Uncertainty and Capital Structure: Evidence from a Pooled Sample of Dow-Jones Industrial Firms, *International Review of Economics & Finance*, 11 (1), April, pp. 45-55.

Heyman, T. 1999. *Mexico for the Global Investor: Emerging Markets, Theory and Practice*. Mexico: Editorial Milenio, S.A. de C.V.

Hofstede, G., 1991. *Cultures and Organizations: Software of the Mind*. London: McGraw-Hill.

Hoshino, T., 2010. Business Groups in Mexico. In: A. Colpan, T. Hikino and J. R. Lincoln. The Oxford Handbook of Business Groups. Oxford: Oxford University Press, 2010, pp. 424-455.

Husted, B. W. and Serrano, C., 2002. Corporate Governance in Mexico. *Journal of Business Ethics*, 37, pp. 337-348.

ICB, 2009. The definitive structure for company classification. *In: ICB Structure* [online]. Available from: http://www.icbenchmark.com/icb_structure.html [Accessed May 2009].

Infosel, 2009. Database of Annual Financial Statements**.** *In: Infosel Financiero* [online]. Mexico: Infoselective S.A. de C.V. Available from: http://www. infoselfinanciero.com.mx/ [Accessed on 2009].

ISI Emerging Markets, 2009. Database of Annual Financial Statements: Mexico. *In: Emerging Markets Information Service, EMIS* [online]. Euromoney Institutional Investor. Available from: http://www.securities.com [Accessed on 2009].

Israel, R., 1992. Capital and Ownership Structures, and the Market for Corporate Control. *The Review of Financial Studies,* 5 (2), pp.181-198.

Investopedia, 2012. Definition of Petrodollars. *In*: *Investopedia* [online]. ValueClick, Inc. Available from: http://www.investopedia.com/terms/p/petrodollars.asp#axzz1rNz4sW8i [Accessed January 2012].

Investorglossary, 2011. Emerging Market. *In: Investorglossary.com: Defining the world of Investing* [online]. Third Rock Investments, Inc. Available from: http://www.investorglossary.com/emerging-market.htm [Accessed February 2011].

Investorwords, 2011. Emerging Market. *In Investorwords.com: The biggest, best investing glossary in the web* [online]. Web Finance Inc. Available from: http://www.investorwords.com/1693/emerging_market.html [Accessed February 2011].

Jensen, M. C., 1986. Agency Cost of Free Cash Flow, Corporate Finance and Takeovers. *The American Economic Review*, 76 (2), pp. 323-329.

Jensen, M. C. and Meckling, W. H., 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics,* 3 (4), pp. 305-360.

Jung, K., Kim, Y.-C. and Stulz, R., 1996. Timing, investment opportunities, managerial discretion, and the security issue decision. *Journal of Financial Economics,* 42, pp. 159-185.

Khanna,T. and Rivkin, J. W., 2001. Estimating the Performance Effects of Business Groups in Emerging Markets. *Strategic Management Journal,* 22, pp. 45-74.

Khanna,T. and Yafeh, Y., 2007. Business Groups in Emerging Markets: Paragons or Parasites. *Journal of Economic Literature,* XLV (June 2007) pp. 331-372.

Klapper, L. and Love, I., 2002. Corporate Governance, Investor Protection, and Performance in Emerging Markets. *World Bank Policy Research* [online], Working Paper 2818, pp. 1-39. Available from: http://go.worldbank.org/3MIWOZJT60 [Accessed 7 November 2006].

Korajczyk, R.A., and Levy, A., 2003. Capital Structure Choice: Macroeconomic Conditions and Financial Constrains, *Journal of Financial Economics*, 68 (1), April, pp. 75-109.

La Porta, R., Lopez de Silanes, F., and Shleifer, A., 1999. Corporate Ownership around the World. *The Journal of Finance,* 54 (2), pp. 471-517.

La Porta, R., Lopez de Silanes, F., Shleifer, A. and Vishny, R. W., 1997. Legal Determinants of External Finance. *The Journal of Finance,* LII, pp. 1131-1150.

La Porta, R., Lopez de Silanes, F., Shleifer, A. and Vishny, R. W., 1998. Law and Finance. *The Journal of Political Economy,* 106 (6), pp. 1113-1155.

La Porta, R., Lopez de Silanes, F., Shleifer, A. and Vishny, R. W., 2000. Investor Protection and Corporate Governance. *Journal of Financial Economics*, 58, pp. 3-27.

Langlois, R. N., 2009. Economic Institutions and Boundaries of the Firm: The Case of Business Groups. *University of Connecticut, Department of Economics Working Paper Series* [online]. Available from: http://www.econ.uconn.edu/ [Accessed October 2012].

Li, C., 2011. What are Emerging Markets?. *The University of Iowa, Center for International Finance and Development* [online]. Available from: http://blogs.law.uiowa.edu/ebook/faqs/what-are-emerging-markets [Accessed April 2012].

Li, K., Yue, H., and Zhao, L., 2006. Ownership, Institutions and Capital Structure: Evidence from Chinese Firms. *Social Science Research Network* [online], March, pp.1-52. Available from: http://ssrn.com/abstract=891529 [Accessed 15 July 2006].

Licht, A., Goldschmidt, C. and Schwartz, S. H., 2005. Culture, Law and Corporate Governance. *International Review of Law and Economics*, 25, pp. 229-251.

Lopez-de-Silanes, F., 2002. NAFTA and Mexico's reforms on investor protection. *Manuscript Yale University and NBER* [online], June, pp. 1-41. Available from: http://ctrc.sice.oas.org/geograph/north/silanes.pdf [Accessed 30 September 2006].

Lovisuth, S., 2008. *The Strategic Use of Corporate Debt under product market competition: Theory and Evidence.* Thesis (PhD). School of Management, University of Bath.

Mallin, C. A., 2007. *Corporate Governance.* 2nd ed. New York: Oxford University Press.

Masoni, E. D., 2011. *El conflicto de Chiapas*. [online]. Available from: http://www.monografias.com/trabajos/chiapas/chiapas.shtml [Accessed July 2011].

MCSI Barra, 2009. *Global Industry Classification Standard* [online]. New York. Available from: http://www.mscibarra.com/products/gics/index.jsp [Accessed May 2009].

Menéndez Alonso, E., 2003. Does Diversification Strategy Matter in Explaining Capital Structure? Some evidence from Spain. *Applied Financial Economics*, 13 (6), pp. 427-430.

México, 1993. *Ley de Inversión Extranjera*. México: Cámara de Diputados del Honorable Congreso de la Unión. Available from: http://www.diputados.gob.mx/LeyesBiblio/ref/lie/LIE_orig_27dic93_ima.pdf [Accessed November 2007].

–, [2005] 1975. *Ley del Mercado de Valores (LMV)*. México: Cámara de Diputados del Honorable Congreso de la Unión. Available from: http://www.diputados.gob.mx/LeyesBiblio/pdf/LMV.pdf [Accessed 11 August 2006].

–, [2006] 1934. *Ley General de Sociedades Mercantiles (LGSM)*. México: Cámara de Diputados del Honorable Congreso de la Unión. Available from: http://www.diputados.gob.mx/LeyesBiblio/pdf/144.pdf [Accessed 8 August 2006].

Miguel, A. and Pindado, J., 2001. Determinants of Capital Structure: New Evidence from Spanish panel data. *Journal of Corporate Finance*, 7, pp. 77-99.

Miguel, A., Pindado, J. and De La Torre, C., 2005. Ownership Structure and Performance: A Comparison of Different Corporate Governance Systems. *Corporate Ownership & Control*, 2 (4), pp. 76-85.

Miller, M. H., 1977. Debt and Taxes. *The Journal of Finance,* XXXII (2), pp. 261-275.

Modigliani, F. and Miller, M. H., 1958. The cost of Cost of Capital, Corporate Finance and the Theory of Investment. *The American Economic Review*, 48**,** pp. 261-297.

Modigliani, F. and Miller, M. H., 1963. Corporate Income Taxes and the Cost of Capital: A correction, *The American Economic Review*, 53 (3)**,** pp. 433-443.

Molinar, J. 2002. The Democratic Transition and the Distribution of Power: Challenges for the Mexican Political System. In: Woodrow Wilson Center. *Democracy in Action: Four Visions of Mexico Transition Process* [online], November 2002(4), pp. 1-8. Available from: http://www.wilsoncenter.org/sites/default/files/Bulletin.Democracy.pdf [Accessed October 2012].

Myers, S. C., 1977. Determinants of Corporate Borrowing. *Journal of Financial Economics*, 5, pp. 147-175.

Myers, S., 1983. The Search for Optimal Capital Structure, *Midland Corporate Finance Journal*, 1, pp. 6-16.

Myers, S.C., 1984, The capital structure puzzle, *Journal of Finance,* XXXIX (3), pp. 575-592.

Myers, S. C. and Majluf, N. S., 1984. Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have. *Journal of Financial Economics,* 13 (2), pp. 187-221.

Nenova, T., 2003. The value of corporate voting rights and control: A cross-country analysis. *Journal of Financial Economics,* 68, pp. 325-351.

O'Neill, J., Wilson, D., Daly, K., Stupnytska, A., Aslam, A., Ahmed, S. and Kelston, A., 2010. Financial Development Across the N-11. *Global Economics Weekly* [online], 10 (21), pp. 1-8. Available from: http://360.gs.com [Accessed 10 April 2012].

O'Neill, J., Wilson, D., Purushothaman, R. and Stupnytska, A., 2005. How Solid are the BRICs? *Global Economics Paper* [online], 134, pp. 1-24. Available from: http://www.goldmansachs.com/our-thinking/brics/brics-reports-pdfs/how-solid.pdf [Accessed 10 April 2012].

Pandey, I. M., 2004. Capital Structure, Profitability and Market Structure: Evidence from Malaysia. *Asia Pacific Journal of Economics and Business,* 8 (2)**,** pp. 78-91.

Rajan, R.G., and Zingales, L., 1995. What do We Know about Capital Structure? Some Evidence form International Data, *The Journal of Finance*, L (5), December, pp. 1421-1460.

Ross, S. A., 1977. The Determination of Financial Structure: the incentive-signaling approach. *The Bell Journal of Economics*, Spring, pp. 23-40.

Ross, S. A., Westerfield, R. W. and Jaffe, J., 2002. *Corporate Finance*, 6th Ed. New York, McGraw Hill.

Ross, S. A., Westerfield, R. W. and Jordan, B. D., 2007. *Essentials of Corporate Finance*, 6th ed. McGraw Hill International Edition.

Ross, S. A., Westerfield, R. W., Jaffe, J. and Jordan, B. D., 2008. *Modern Financial Management*, McGraw Hill International Edition.

Ruggiero, G., 1999. Latin American Debt Crisis: What Where It's Causes And Is It Over?. *Independent study* [online]. Available from: http://www.angelfire.com/nj/GregoryRuggiero/latinamericancrisis.html [Accessed 25 January 2012].

Ruiz-Porras, A. and Steinwascher, W., 2007. Corporate governance, strategic diversification and performance of firms in Mexico. *Munich Personal RePEc Archive* [online], MPRA Paper No. 3819 (in Spanish). Available from: http://mpra.ub.uni-muenchen.de/3819/1/MPRA_paper_3819.pdf [Accessed 14 January 2010].

Schmal , J. P., 2004. History of Mexico, Chiapas- Forever Indigenous [online]. Texas: Houston Institute for Culture. Available from: http://www.houstonculture.org/mexico/chiapas.html [Accessed October 2011].

Schneider, B. R., 2009. Business Groups and the State: The Politics of Expansion, Restructuring, and Collapse. *Proceedings of the annual meeting of the American Political Science Association (PSA),* [online], September 1999, pp. 1-28. Available from: SSRN: http://ssrn.com/abstract=1449087 [Accessed October 2012].

Schwartz, S.H., 1994. Cultural dimensions of values: Toward an understanding of national differences. *In:* U. Kim, H. C. Triandis, C. Kagitcibasi , S. C. Choi, *and* G. Yoon, *Individualism and collectivism : Theory, method, and applications*. Newbury Park, CA*:* Sage.

Shafaeddin, M. 2006. Does Trade Openness Favour or Hinder Industrialization and Development?. *Third World Network Trade & Development Series* [online]. pp. 1-86. Available from: http://www.twnside.org.sg/title2/t&d/tnd31.pdf [Accessed February 2012].

Shleifer, A. and Vishny, R. W., 1986. Large Shareholders and Corporate Control. *The Journal of Political Economy*, 94 (3)**,** pp. 461-488.

Silva, F., Majluf, N. S. and Paredes, R. D., 2006. Family ties, Interlocking directors, and Performance of Business Groups in Emerging Countries: The case of Chile. *Journal of Business Research*, 59, pp. 315-321.

Singh, M. and Nejadmalayeri, A., 2004. Internationalization, Capital Structure, and Cost of Capital: Evidence from French corporations. *Journal of Multinational Financial Management*, 14 (2), pp. 153-169.

Sipaz, 2000. First Declaration of the Lacandon Jungle. *In: Servicio Internacional para la Paz* [online]. California: Wordpress. Available from: http://www.sipaz.org/es/chiapas/proceso-de-paz-proceso-de-guerra.html. [Accessed October 2011].

Sogorb-Mira, F. and López-Gracia, J., 2003. Pecking Order Versus Trade-off: An Empical Approach to the Small and Medium Enterprise Capital Structure. *Social Science Research Network* [online]. Available from SSRN: http://ssrn.com/abstract=393160. [Accessed 14 May 2008].

Stavenhagen, R. 2002. Policymaking in Mexico's New Democracy: Achieving Peace in Chiapas. In: Woodrow Wilson Center. *Democracy in Action: Four Visions of Mexico Transition Process* [online], November 2002(4), pp. 1-8. Available from: http://www.wilsoncenter.org/sites/default/files/Bulletin.Democracy.pdf [Accessed October 2012].

Stulz, R. M., 1988. Managerial Control of Voting Rights: Financing Policies and the Market for Corporate Control. *Journal of Financial Economics*, 20, pp. 25-54.

Titman, S., 1984. The Effect of Capital Structure on Firm's Liquidation Decision. *Journal of Financial Economics*, 13 (March), pp. 137-151.

Villalonga, B. and Amit, R. 2006. How do family ownership, control and management affect firm value?. *Journal of Financial Economics*, 80, pp. 385-417.

Wald, J. K., 1999. How firm characteristics affect Capital Structure: An International comparison. *The Journal of Financial Research*, XXIII (2), pp. 161-187.

Wikipedia, 2010. Mexican Stock Exchange. *In: Wikipedia: the free encyclopaedia* [online]. St Petersburg, Florida: Wikimedia Foundation. Available from: http://en.wikipedia.org/wiki/ Bolsa_Mexicana_de_Valores [Accessed February 2010].

Williamson, E., 2009. *The Penguin History of Latin America.* Revised ed. England, Penguin Books.

Williamson, J. 2004. *A Short History of the Washington Consensus*. Proceedings of the *From Washington Consensus towards a new Global Governance Conference* [online], 24-25 September 2004 Barcelona. Washington, D.C.: Peterson Institute for International Economics. Available from: http://www.iie.com/publications/papers/williamson0904-2.pdf [Accessed January 2012].

Wilson, D. and Stupnytska, A., 2007. The N-11: More Than an Acronym. *Global Economics Paper* [online], 153, pp. 1-24. Available from: http://www.chicagobooth.edu/alumni/clubs/pakistan/docs/next11dream-march%20'07-goldmansachs.pdf [Accessed February 2012].

Wiwattanakantang, Y., 1999. An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal*, 7, pp. 371-403.

Woldenberg, J. 2002. The Process of Democratic Change in Mexico. In: Woodrow Wilson Center. *Democracy in Action: Four Visions of Mexico Transition Process* [online], November 2002(4), pp. 1-8. Available from: http://www.wilsoncenter.org/sites/default/files/Bulletin.Democracy.pdf [Accessed October 2012].

Appendix A

Where ***q*** is the probability of a *good economic state* and ***1 - q*** is the probability of *a bad economic state*

CASE 1: $q = 1$; $1 - q = 0$

If the network is formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	361.38	121.27	482.65
0.2	361.38	121.27	482.65
0.3	361.38	121.27	482.65
0.4	361.38	121.27	482.65
0.5	361.38	121.27	482.65
0.6	361.38	121.27	482.65
0.7	361.38	121.27	482.65
0.8	361.38	121.27	482.65
0.9	361.38	121.27	482.65
1	361.38	121.27	482.65

If network is NOT formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	361.38	121.27	482.65
0.2	361.38	121.27	482.65
0.3	361.38	121.27	482.65
0.4	361.38	121.27	482.65
0.5	361.38	121.27	482.65
0.6	361.38	121.27	482.65
0.7	361.38	121.27	482.65
0.8	361.38	121.27	482.65
0.9	361.38	121.27	482.65
1	361.38	121.27	482.65

The differences between the network formation and the non-network formation are:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	0.00	0.00	0.00
0.2	0.00	0.00	0.00
0.3	0.00	0.00	0.00
0.4	0.00	0.00	0.00
0.5	0.00	0.00	0.00
0.6	0.00	0.00	0.00
0.7	0.00	0.00	0.00
0.8	0.00	0.00	0.00
0.9	0.00	0.00	0.00
1	0.00	0.00	0.00

CASE 2: $q = 0.75$; $1 - q = 0.25$

If the network is formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	279.96	90.95	370.91
0.2	279.96	90.95	370.91
0.3	279.96	90.95	370.91
0.4	279.96	90.95	370.91
0.5	279.96	90.95	370.91
0.6	303.60	96.91	400.51
0.7	309.25	99.88	409.12
0.8	315.23	102.56	417.80
0.9	321.57	105.25	426.82
1	328.27	108.01	436.28

If network is NOT formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	279.96	90.95	370.91
0.2	279.96	90.95	370.91
0.3	279.96	90.95	370.91
0.4	279.96	90.95	370.91
0.5	279.96	90.95	370.91
0.6	279.96	90.95	370.91
0.7	279.96	90.95	370.91
0.8	279.96	90.95	370.91
0.9	279.96	90.95	370.91
1	279.96	90.95	370.91

The differences between the network formation and the non-network formation are:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	0.00	0.00	0.00
0.2	0.00	0.00	0.00
0.3	0.00	0.00	0.00
0.4	0.00	0.00	0.00
0.5	0.00	0.00	0.00
0.6	23.64	5.96	29.61
0.7	29.29	8.92	38.21
0.8	35.28	11.61	46.89
0.9	41.62	14.30	55.92
1	48.31	17.06	65.37

CASE 3: $q = 0.5,\ 1 - q = 0.5.$

If the network is formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	198.54	60.63	259.17
0.2	198.54	60.63	259.17
0.3	198.54	60.63	259.17
0.4	198.54	60.63	259.17
0.5	198.54	60.63	259.17
0.6	245.83	72.56	318.38
0.7	257.11	78.48	335.60
0.8	269.09	83.85	352.95
0.9	281.77	89.23	371.00
1	295.16	94.75	389.91

If network is NOT formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	198.54	60.63	259.17
0.2	198.54	60.63	259.17
0.3	198.54	60.63	259.17
0.4	198.54	60.63	259.17
0.5	198.54	60.63	259.17
0.6	198.54	60.63	259.17
0.7	198.54	60.63	259.17
0.8	198.54	60.63	259.17
0.9	198.54	60.63	259.17
1	198.54	60.63	259.17

The differences between the network formation and the non-network formation are:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	0.00	0.00	0.00
0.2	0.00	0.00	0.00
0.3	0.00	0.00	0.00
0.4	0.00	0.00	0.00
0.5	0.00	0.00	0.00
0.6	47.29	11.92	59.21
0.7	58.58	17.85	76.42
0.8	70.56	23.22	93.77
0.9	83.24	28.60	111.83
1	96.62	34.12	130.74

CASE 4: $q = 0.25$; $1 - q = 0.75$

If the network is formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	117.12	30.32	147.43
0.2	117.12	30.32	147.43
0.3	117.12	30.32	147.43
0.4	117.12	30.32	147.43
0.5	117.12	30.32	147.43
0.6	188.05	48.20	236.25
0.7	204.98	57.09	262.07
0.8	222.95	65.14	288.09
0.9	241.97	73.21	315.18
1	262.05	81.49	343.54

If network is NOT formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	117.12	30.32	147.43
0.2	117.12	30.32	147.43
0.3	117.12	30.32	147.43
0.4	117.12	30.32	147.43
0.5	117.12	30.32	147.43
0.6	117.12	30.32	147.43
0.7	117.12	30.32	147.43
0.8	117.12	30.32	147.43
0.9	117.12	30.32	147.43
1	117.12	30.32	147.43

The differences between the network formation and the non-network formation are:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	0.00	0.00	0.00
0.2	0.00	0.00	0.00
0.3	0.00	0.00	0.00
0.4	0.00	0.00	0.00
0.5	0.00	0.00	0.00
0.6	70.93	17.88	88.82
0.7	87.86	26.77	114.64
0.8	105.83	34.83	140.66
0.9	124.85	42.89	167.75
1	144.93	51.18	196.11

CASE 5: q = 0; 1 - q = 1

If the network is formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	35.70	0.00	35.70
0.2	35.70	0.00	35.70
0.3	35.70	0.00	35.70
0.4	35.70	0.00	35.70
0.5	35.70	0.00	35.70
0.6	130.27	23.85	154.12
0.7	152.85	35.70	188.54
0.8	176.81	46.44	223.24
0.9	202.17	57.19	259.36
1	228.94	68.23	297.17

If network is NOT formed:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	35.70	0.00	35.70
0.2	35.70	0.00	35.70
0.3	35.70	0.00	35.70
0.4	35.70	0.00	35.70
0.5	35.70	0.00	35.70
0.6	35.70	0.00	35.70
0.7	35.70	0.00	35.70
0.8	35.70	0.00	35.70
0.9	35.70	0.00	35.70
1	35.70	0.00	35.70

The differences between the network formation and the non-network formation are:

Empathy	***Expected Payoffs***		***Expected Welfare***
	Firm A	*Firm B*	
0.1	0.00	0.00	0.00
0.2	0.00	0.00	0.00
0.3	0.00	0.00	0.00
0.4	0.00	0.00	0.00
0.5	0.00	0.00	0.00
0.6	94.58	23.85	118.42
0.7	117.15	35.70	152.85
0.8	141.11	46.44	187.55
0.9	166.47	57.19	223.66
1	193.24	68.23	261.47

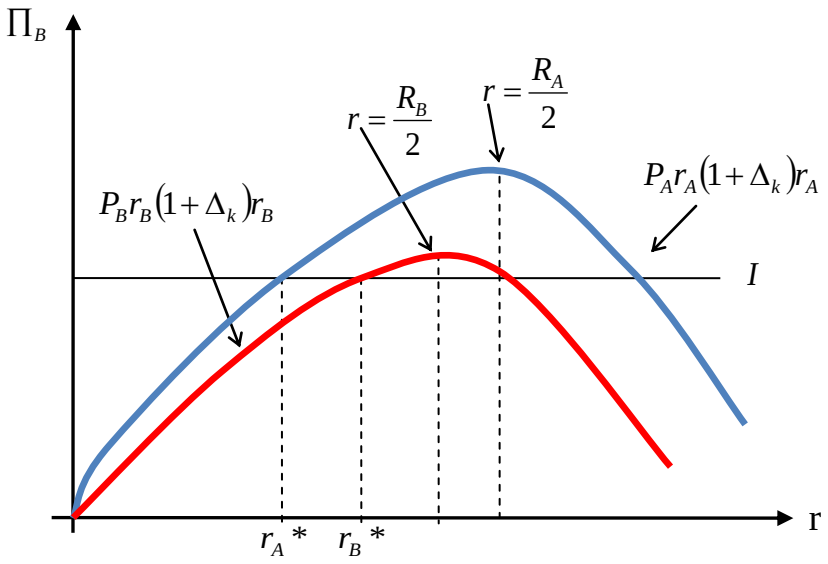
In each case, we consider the difference tables to determine the effect of network-forming costs on the decision to form the network. In each case, we note that (consistent with proposition 2), for any empathy below the critical value ($\theta' = 0.5$), forming the network does not increase the payoffs of either firm (as firm B is unable to obtain bank finance in the bad state, and empathy is not enhanced in the good state).

When empathy is above this critical value, the probabilities of the good and bad states affect the payoff enhancements due to the network. I note the following. As q increases, the empathy enhancement reduces at each level of empathy. Thus, networks become less (more) important as the probability of the good state of the economy increases (decreases). Furthermore, the network benefits are increasing in empathy in every case. We consider the effect of the level of forming costs on network formation.

Appendix B

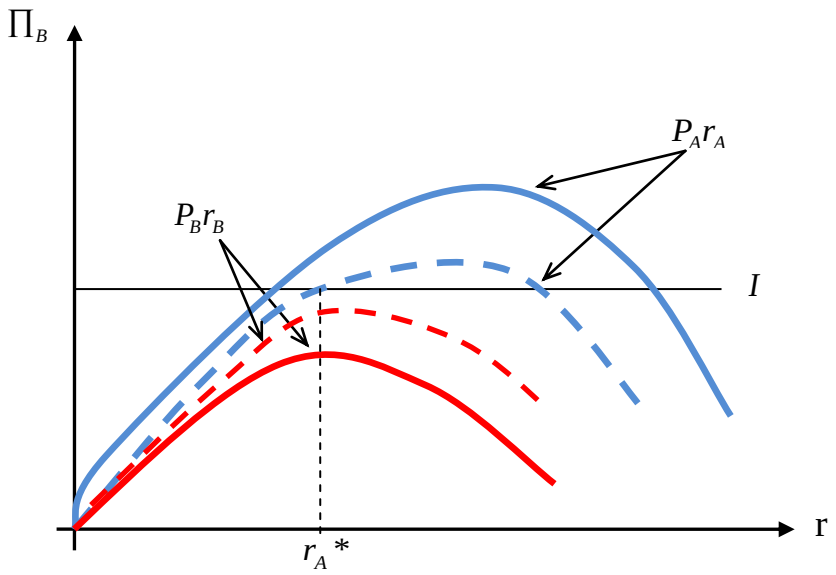
Banks' Expected Payoff and Lending/Loan Rate Decisions.

Figure B.1: Good (Normal) Economic Conditions



In normal economic conditions both firms are able to obtain bank finance. The competitive banking sector competes the loan rate down to $r_A^* = ..., r_B^* = ...$.

Figure B.2: Bad Economic Conditions (Crash):



Key to diagram:

a) Solid curves represent network not formed

b) Doted curves represent network formed

In bad economic conditions, we observe that in the absence of the network, only Firm A is able to obtain bank finance. Furthermore, Bank B cannot find a loan rate at which it breaks even; in other words, at all loan rates bank B's payoffs are negative.

Appendix C. Share ownership structure of the Mexican companies listed in the MSE

ALFA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Class I Series A *(no par value)*	**560,133,305**	93.36%	**100.00%**
Shares in company's treasury	39,866,695	6.64%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Family	**252,059,987**	45.00%	**77.17%**
NAFINSA Trust	**180,210,797**	32.17%	0.00%
Public Float	127,862,521	22.83%	**22.83%**
TOTAL	**560,133,305**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Class I Series A *(no par value)*	**563,133,305**	93.86%	**100.00%**
Shares in company's treasury	36,866,695	6.14%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Family	**253,409,987**	45.00%	**71.28%**
NAFINSA Trust	**147,981,605**	26.28%	0.00%
Public Float	161,741,713	28.72%	**28.72%**
TOTAL	**563,133,305**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Class I Series A *(no par value)*	**580,549,200**	96.76%	**100.00%**
Shares in company's treasury	19,450,800	3.24%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Family	**278,663,616**	48.00%	**76.06%**
NAFINSA Trust	**162,895,302**	28.06%	0.00%
Public Float	138,990,282	23.94%	**23.94%**
TOTAL	**580,549,200**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

ALFA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Class I Series A *(no par value)*	**580,549,200**	96.76%	**100.00%**
Shares in company's treasury	19,450,800	3.24%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Family	**278,663,616**	48.00%	**76.49%**
NAFINSA Trust	**165,388,149**	28.49%	0.00%
Public Float	136,497,435	23.51%	**23.51%**
TOTAL	**580,549,200**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Class I Series A *(no par value)*	**588,379,200**	98.06%	**100.00%**
Shares in company's treasury	11,620,800	1.94%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Family	**282,422,016**	48.00%	**73.60%**
NAFINSA Trust	**150,625,075**	25.60%	0.00%
Public Float	155,332,109	26.40%	**26.40%**
TOTAL	**588,379,200**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Class I Series A *(no par value)*	**588,379,200**	98.06%	**100.00%**
Shares in company's treasury	11,620,800	1.94%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Family	**282,422,016**	48.00%	**73.60%**
NAFINSA Trust	**150,625,075**	25.60%	0.00%
Public Float	155,332,109	26.40%	**26.40%**
TOTAL	**588,379,200**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

ALSEA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**623,261,196**	99.99%	**100.00%**
Shares in company's treasury	69,724	0.01%	0.00%
TOTAL SHARES	**623,330,920**	**100.00%**	**100.00%**
***Main Shareholders**	**351,469,816**	56.39%	**56.39%**
Executives and Employees	**31,529,972**	5.06%	**5.06%**
Public Float	**235,362,948**	37.76%	**37.76%**
Trust	**4,898,460**	0.79%	**0.79%**
TOTAL	**623,261,196**	100.00%	**100.00%**

** Mrs. Alicia Martínez Alvarado and Mr. Cosme Alberto, Mr. Alberto and Mr. Armando Torrado Martínez are considered to be the main shareholders.*

***** Data Annual Rep 06*** ***31/12/2006***

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**136,656,982**	98.70%	**100.00%**
Shares in company's treasury	1,799,929	1.30%	0.00%
TOTAL SHARES	**138,456,911**	**100.00%**	**100.00%**
***Main Shareholders**	**82,724,082**	60.53%	**60.53%**
Executives and Employees	**14,048,589**	10.28%	**10.28%**
Public Float	**39,038,226**	28.57%	**28.57%**
Trust	**846,085**	0.62%	**0.62%**
TOTAL	**136,656,982**	100.00%	**100.00%**

** Mrs. Alicia Martínez Alvarado, Mr. Alberto Torrado Monge and Mr. Cosme Alberto, Mr. Alberto and Mr. Armando Torrado Martínez are considered to be the main shareholders.*

***** Data Annual Rep 05*** ***31/12/2005***

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**124,222,344**	99.66%	**100.00%**
Shares in company's treasury	425,181	0.34%	0.00%
TOTAL SHARES	**124,647,525**	**100.00%**	**100.00%**
***Main Shareholders**	**77,078,323**	62.05%	**62.05%**
Dominos Pizza International	**10,468,185**	8.43%	**8.43%**
Executives and Employees	**4,654,741**	3.75%	**3.75%**
Public Float	**31,475,010**	25.34%	**25.34%**
Trust	**546,085**	0.44%	**0.44%**
TOTAL	**124,222,344**	100.00%	**100.00%**

** Mrs. Alicia Martínez Alvarado, Mr. Alberto Torrado Monge and Mr. Cosme Alberto, Mr. Alberto and Mr. Armando Torrado Martínez are considered to be the main shareholders.*

***** Data Annual Rep 04*** ***31/12/2004***

ALSEA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**116,769,017**	94.60%	**100.00%**
Shares in company's treasury	6,659,441	5.40%	0.00%
TOTAL SHARES	**123,428,458**	**100.00%**	**100.00%**
***Main Shareholders**	**88,896,460**	76.13%	**76.13%**
Dominos Pizza International	**9,435,873**	8.08%	**8.08%**
Executives and Employees	**4,082,299**	3.50%	**3.50%**
Public Float	**14,354,385**	12.29%	**12.29%**
Trust	**0**	0.00%	**0.00%**
TOTAL	**116,769,017**	100.00%	**100.00%**

** Mrs. Alicia Martínez Alvarado, Mr. Alberto Torrado Monge and Mr. Cosme Alberto, Mr. Alberto and Mr. Armando Torrado Martínez are considered to be the main shareholders.*

***** Data Annual Rep 03*** ***31/12/2003***

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**118,751,417**	96.21%	**100.00%**
Shares in company's treasury	4,677,041	3.79%	0.00%
TOTAL SHARES	**123,428,458**	**100.00%**	**100.00%**
***Main Shareholders**	**88,896,460**	74.86%	**74.86%**
Dominos Pizza International	**9,435,873**	7.95%	**7.95%**
Executives and Employees	**6,487,205**	5.46%	**5.46%**
Public Float	**13,931,879**	11.73%	**11.73%**
Trust	**0**	0.00%	**0.00%**
TOTAL	**118,751,417**	100.00%	**100.00%**

** Mrs. Alicia Martínez Alvarado, Mr. Alberto Torrado Monge and Mr. Cosme Alberto, Mr. Alberto and Mr. Armando Torrado Martínez are considered to be the main shareholders.*

***** Data Annual Rep 02*** ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**120,755,627**	98.22%	**100.00%**
Shares in company's treasury	2,191,600	1.78%	0.00%
TOTAL SHARES	**122,947,227**	**100.00%**	**100.00%**
***Main Shareholders**	**82,667,519**	68.46%	**68.46%**
Dominos Pizza International	**8,318,405**	6.89%	**6.89%**
Executives and Employees	**7,319,046**	6.06%	**6.06%**
Public Float	**22,450,657**	18.59%	**18.59%**
Trust	**0**	0.00%	**0.00%**
TOTAL	**120,755,627**	100.00%	**100.00%**

** Mr. Alberto Torrado Monge and Mr. Cosme Alberto, Mr. Alberto and Mr. Armando Torrado Martínez are considered to be the main shareholders.*

***** Data Annual inform 01*** ***31/12/2001***

CONSORCIO ARA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**1,312,847,496**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,312,847,496**	**100.00%**	**100.00%**
German Ahumada Russek	240,018,000	18.28%	
Luis Felipe Ahumada Russek	240,018,000	18.28%	
Fam. Ahumada Russek	**480,036,000**	**36.56%**	**37.77%**
Public Float	790,951,496	60.25%	**62.23%**
ADRs	**41,860,000**	3.19%	0.00%
TOTAL	**1,312,847,496**	**100.00%**	**100.00%**

***** Data Annual Rep 06*** ***31/12/2006***

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**328,211,874**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**328,211,874**	**100.00%**	**100.00%**
German Ahumada Russek	84,154,500	25.64%	
Luis Felipe Ahumada Russek	84,154,500	25.64%	
Fam. Ahumada Russek	**168,309,000**	**51.28%**	**52.97%**
Public Float	149,437,874	45.53%	**47.03%**
ADRs	**10,465,000**	3.19%	0.00%
TOTAL	**328,211,874**	**100.00%**	**100.00%**

***** Data Annual Rep 05*** ***31/12/2005***

Data provided by ARA's Director of Investor Relations

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**328,211,874**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**328,211,874**	**100.00%**	**100.00%**
German Ahumada Russek	84,154,500	25.64%	
Luis Felipe Ahumada Russek	84,154,500	25.64%	
Fam. Ahumada Russek	**168,309,000**	**51.28%**	**53.99%**
Public Float	143,417,004	43.70%	**46.01%**
ADRs	**16,485,870**	5.02%	0.00%
TOTAL	**328,211,874**	**100.00%**	**100.00%**

***** Data Annual Rep 04*** ***31/12/2004***

Data provided by ARA's Director of Investor Relations

CONSORCIO ARA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**328,211,874**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**328,211,874**	**100.00%**	**100.00%**
German Ahumada Russek	84,154,500	25.64%	
Luis Felipe Ahumada Russek	84,154,500	25.64%	
Fam. Ahumada Russek	**168,309,000**	**51.28%**	**53.99%**
Public Float	143,417,004	43.70%	**46.01%**
ADRs	**16,485,870**	5.02%	0.00%
TOTAL	**328,211,874**	**100.00%**	**100.00%**

***** Data Annual Rep 03*** ***31/12/2003***

Data provided by ARA's Director of Investor Relations

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**328,211,874**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**328,211,874**	**100.00%**	**100.00%**
German Ahumada Russek	92,875,100	28.30%	
Luis Felipe Ahumada Russek	92,875,100	28.30%	
Fam. Ahumada Russek	**185,750,200**	**56.59%**	**59.59%**
Public Float	125,975,804	38.38%	**40.41%**
ADRs	**16,485,870**	5.02%	0.00%
TOTAL	**328,211,874**	**100.00%**	**100.00%**

***** Data Annual Rep 02*** ***31/12/2002***

Data provided by ARA's Director of Investor Relations

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**328,211,874**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**328,211,874**	**100.00%**	**100.00%**
German Ahumada Russek	93,874,600	28.60%	
Luis Felipe Ahumada Russek	93,874,600	28.60%	
Fam. Ahumada Russek	**187,749,200**	**57.20%**	**60.23%**
Public Float	123,976,804	37.77%	**39.77%**
ADRs	16,485,870	5.02%	0.00%
TOTAL	**328,211,874**	**100.00%**	**100.00%**

***** Data Annual Rep 01*** ***31/12/2001***

GRUPO AEROPORTUARIO DEL SURESTE, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B - I Shares *(no par value)*		277,050,000	92.35%	**92.35%**
Series BB - II Shares *(no par value)*		22,950,000	7.65%	**7.65%**
TOTAL SHARES		**300,000,000**	**100.00%**	**100.00%**
ITA, S.A. de C.V. (Trust)	Series B-I	0	7.65%	8.20%
	Series B-II	22,950,000		
Copenhagen Airports A/S*	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Fernando Chico Pardo*	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Mexican Government *(Ministry*	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Agrupacion Aeroporturia Internacional II, SA de CV	Series B-I	58,485,535	19.50%	20.90%
	Series B-II	0		
ADSs	Series B-I	20,167,000	6.72%	0.00%
	Series B-II	0		
Public Float	Series B-I	198,397,465	66.13%	70.90%
	Series B-II	0		
TOTAL	***Series B-I***	***277,050,000***	***100.00%***	***100.00%***
	Series B-II	***22,950,000***		

SHARE OWNERSHIP STRUCTURE 2005				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B - I Shares *(no par value)*		255,000,000	85.00%	**85.00%**
Series BB - II Shares *(no par value)*		45,000,000	15.00%	**15.00%**
TOTAL SHARES		**300,000,000**	**100.00%**	**100.00%**
ITA, S.A. de C.V. (Trust)	Series B-I	0	15.00%	17.98%
	Series B-II	45,000,000		
Copenhagen Airports A/S*	Series B-I	7,500,000	2.50%	3.00%
	Series B-II	0		
Fernando Chico Pardo*	Series B-I	7,500,010	2.50%	3.00%
	Series B-II	0		
Mexican Government *(Ministry*	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Agrupacion Aeroporturia Internacional II, SA de CV	Series B-I	0	0.00%	0.00%
	Series B-II	0		
ADSs	Series B-I	49,737,890	16.58%	0.00%
	Series B-II	0		
Public Float	Series B-I	190,262,100	63.42%	76.03%
	Series B-II	0		
TOTAL	***Series B-I***	***255,000,000***	***100.00%***	***100.00%***
	Series B-II	***45,000,000***		

SHARE OWNERSHIP STRUCTURE 2004				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B - I Shares *(no par value)*		255,000,000	85.00%	**85.00%**
Series BB - II Shares *(no par value)*		45,000,000	15.00%	**15.00%**
TOTAL SHARES		**300,000,000**	**100.00%**	**100.00%**
ITA, S.A. de C.V. (Trust)	Series B-I	0	15.00%	16.00%
	Series B-II	45,000,000		
Copenhagen Airports A/S*	Series B-I	7,500,000	2.50%	2.67%
	Series B-II	0		
Fernando Chico Pardo*	Series B-I	7,000,010	2.33%	2.49%
	Series B-II	0		
Mexican Government *(Ministry*	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Agrupacion Aeroporturia Internacional II, SA de CV	Series B-I	0	0.00%	0.00%
	Series B-II	0		
ADSs	Series B-I	18,710,040	6.24%	0.00%
	Series B-II	0		
Public Float	Series B-I	221,789,950	73.93%	78.85%
	Series B-II	0		
TOTAL	***Series B-I***	***255,000,000***	***100.00%***	***100.00%***
	Series B-II	***45,000,000***		

GRUPO AEROPORTUARIO DEL SURESTE, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B - I Shares *(no par value)*		255,000,000	85.00%	**85.00%**
Series BB - II Shares *(no par value)*		45,000,000	15.00%	**15.00%**
TOTAL SHARES		**300,000,000**	**100.00%**	**100.00%**
ITA, S.A. de C.V. (Trust)	Series B-I	0	15.00%	16.95%
	Series B-II	45,000,000		
***Copenhagen Airports A/S** **	Series B-I	7,500,000	2.50%	2.83%
	Series B-II	0		
***Fernando Chico Pardo** **	Series B-I	5,936,000	1.98%	2.24%
	Series B-II	0		
Mexican Government *(Ministry*	Series B-I	33,260,870	11.09%	12.53%
	Series B-II	0		
Agrupacion Aeroporturia Internacional II, SA de CV	Series B-I	0	0.00%	0.00%
	Series B-II	0		
ADSs	Series B-I	34,550,282	11.52%	0.00%
	Series B-II	0		
Public Float	Series B-I	173,752,848	57.92%	65.46%
	Series B-II	0		
TOTAL	***Series B-I***	***255,000,000***	***100.00%***	***100.00%***
	Series B-II	***45,000,000***		

SHARE OWNERSHIP STRUCTURE 2002				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B - I Shares *(no par value)*		255,000,000	85.00%	**85.00%**
Series BB - II Shares *(no par value)*		45,000,000	15.00%	**15.00%**
TOTAL SHARES		**300,000,000**	**100.00%**	**100.00%**
ITA, S.A. de C.V. (Trust)	Series B-I	0	15.00%	16.41%
	Series B-II	45,000,000		
***Copenhagen Airports A/S** **	Series B-I	7,500,000	2.50%	2.73%
	Series B-II	0		
***Fernando Chico Pardo** **	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Mexican Government *(Ministry*	Series B-I	33,260,870	11.09%	12.13%
	Series B-II	0		
Agrupacion Aeroporturia Internacional II, SA de CV	Series B-I	0	0.00%	0.00%
	Series B-II	0		
ADSs	Series B-I	25,744,000	8.58%	0.00%
	Series B-II	0		
Public Float	Series B-I	188,495,130	62.83%	68.73%
	Series B-II	0		
TOTAL	***Series B-I***	***255,000,000***	***100.00%***	***100.00%***
	Series B-II	***45,000,000***		

SHARE OWNERSHIP STRUCTURE 2001				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B - I Shares *(no par value)*		255,000,000	85.00%	**85.00%**
Series BB - II Shares *(no par value)*		45,000,000	15.00%	**15.00%**
TOTAL SHARES		**300,000,000**	**100.00%**	**100.00%**
ITA, S.A. de C.V. (Trust)	Series B-I	0	15.00%	15.51%
	Series B-II	45,000,000		
***Copenhagen Airports A/S** **	Series B-I	7,500,000	2.50%	2.59%
	Series B-II	0		
***Fernando Chico Pardo** **	Series B-I	0	0.00%	0.00%
	Series B-II	0		
Mexican Government *(Ministry*	Series B-I	33,260,870	11.09%	11.47%
	Series B-II	0		
Agrupacion Aeroporturia Internacional II, SA de CV	Series B-I	0	0.00%	0.00%
	Series B-II	0		
ADSs	Series B-I	9,900,000	3.30%	0.00%
	Series B-II	0		
Public Float	Series B-I	204,339,130	68.11%	70.44%
	Series B-II	0		
TOTAL	***Series B-I***	***255,000,000***	***100.00%***	***100.00%***
	Series B-II	***45,000,000***		

INDUSTRIAS BACHOCO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**600,000,000**	100.00%	**100.00%**
Series L Shares *(no par value)*	**0**	0.00%	0.00%
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Control & Family Trusts shares Series B	**496,500,000**	82.75%	
Control & Family Trusts shares Series L	**0**	0.00%	
Family Robinson Bours	**496,500,000**	82.75%	**97.16%**
ADS shares B	**88,961,964**	14.83%	**0.00%**
ADS shares L	**0**	0.00%	**0.00%**
Public Float	**14,538,036**	2.42%	**2.84%**
TOTAL	**600,000,000**	100.00%	**100.00%**
PF shares B	14,538,036	2.42%	
PF shares L	0	0.00%	
	14,538,036	2.42%	
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SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**450,000,000**	75.00%	**100.00%**
Series L Shares *(no par value)*	**150,000,000**	25.00%	0.00%
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Control & Family Trusts shares Series B	**398,250,000**	66.38%	
Control & Family Trusts shares Series L	**98,250,000**	16.38%	
Family Robinson Bours	**496,500,000**	82.75%	**97.31%**
ADS shares B	**40,725,252**	6.79%	**0.00%**
ADS shares L	**40,725,252**	6.79%	**0.00%**
Public Float	**22,049,496**	3.67%	**2.69%**
TOTAL	**600,000,000**	100.00%	**100.00%**
PF shares B	11,024,748	1.84%	
PF shares L	11,024,748	1.84%	
	22,049,496	3.67%	
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SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**450,000,000**	75.00%	**100.00%**
Series L Shares *(no par value)*	**150,000,000**	25.00%	0.00%
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Control & Family Trusts shares Series B	**398,250,000**	66.38%	
Control & Family Trusts shares Series L	**98,250,000**	16.38%	
Family Robinson Bours	**496,500,000**	82.75%	**96.89%**
ADS shares B	**38,970,072**	6.50%	**0.00%**
ADS shares L	**38,970,072**	6.50%	**0.00%**
Public Float	**25,559,856**	4.26%	**3.11%**
TOTAL	**600,000,000**	100.00%	**100.00%**
PF shares B	12,779,928	2.13%	
PF shares L	12,779,928	2.13%	
	25,559,856	4.26%	
***** Data F20-04***	***31/12/2004***		

INDUSTRIAS BACHOCO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**450,000,000**	75.00%	**100.00%**
Series L Shares *(no par value)*	**150,000,000**	25.00%	0.00%
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Control & Family Trusts shares Series B	**398,250,000**	66.38%	
Control & Family Trusts shares Series L	**98,250,000**	16.38%	
Family Robinson Bours	**496,500,000**	82.75%	**93.48%**
ADS shares B	**23,983,338**	4.00%	**0.00%**
ADS shares L	**23,983,338**	4.00%	**0.00%**
Public Float	**55,533,324**	9.26%	**6.52%**
TOTAL	**600,000,000**	100.00%	**100.00%**
PF shares B	27,766,662	4.63%	
PF shares L	27,766,662	4.63%	
	55,533,324	9.26%	
***** Data F20-03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**447,465,700**	74.58%	**100.00%**
Series L Shares *(no par value)*	**147,465,700**	24.58%	0.00%
Shares in company's treasury	5,068,600	0.84%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Control & Family Trusts shares Series B	**398,250,000**	66.94%	
Control & Family Trusts shares Series L	**98,250,000**	16.51%	
Family Robinson Bours	**496,500,000**	83.46%	**91.63%**
ADS shares B	**12,858,702**	2.16%	**0.00%**
ADS shares L	**12,858,702**	2.16%	**0.00%**
Public Float	**72,713,996**	12.22%	**8.37%**
TOTAL	**594,931,400**	100.00%	**100.00%**
PF shares B	36,356,998	6.11%	
PF shares L	36,356,998	6.11%	
	72,713,996	12.22%	
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**448,154,100**	74.69%	**100.00%**
Series L Shares *(no par value)*	**148,154,100**	24.69%	0.00%
Shares in company's treasury	3,691,800	0.62%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Control & Family Trusts shares Series B	**398,250,000**	66.79%	
Control & Family Trusts shares Series L	**98,250,000**	16.48%	
Family Robinson Bours	**496,500,000**	83.26%	**90.77%**
ADS shares B	**9,411,236**	1.58%	**0.00%**
ADS shares L	**9,333,708**	1.57%	**0.00%**
Public Float	**81,063,256**	13.59%	**9.23%**
TOTAL	**596,308,200**	100.00%	**100.00%**
PF shares B	40,492,864	6.79%	
PF shares L	40,570,392	6.80%	
	81,063,256	**13.59%**	
***** Data Annual Rep 01***	***31/12/2001***		

GRUPO BIMBO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,175,800,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,175,800,000**	**100.00%**	**100.00%**
Fam. Servitje, Mata, Jorba & Sendra. *	**60,260,006**	5.13%	**5.13%**
Companies	**762,024,408**	64.81%	**64.81%**
Public Float	**353,515,586**	30.07%	**30.07%**
TOTAL	**1,175,800,000**	100.00%	**100.00%**
Normaciel, S.A. de C.V.	439,006,285	37.34%	
Promociones Monser, S.A. de C.V.	134,854,636	11.47%	
Philae, S.A. de C.V.	58,173,026	4.95%	
Grupo Valacci, S.A. de C.V.	45,947,077	3.91%	
Distribuidora Comercial Senda, S.A. de C.V.	43,740,000	3.72%	
Marlupag, S.A. de C.V.	40,303,384	3.43%	
TOTAL	**762,024,408**	**64.81%**	

Families Servitje, Mata, Jorba & Sendra, through some of the previous companies, either directly or indirectly, have a majoritarian shareholder ownership of Industrias BIMBO, S.A.B DE C.V.

Banco Nacional de Mexico, S.A.	60,260,006	5.13%	
		0.00%	
Main shareholders		0.00%	
TOTAL	**60,260,006**	**5.13%**	

** These two trust are controlled by the family Servitje Montull*
******* *The individual **direct** tenancy of any of these investors does not reach the five percent of the total capital of the company.*

***** Data Annual Rep 06*** ***31/12/2006***

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,175,800,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,175,800,000**	**100.00%**	**100.00%**
Fam. Servitje, Mata, Jorba & Sendra. *	**155,253,679**	13.20%	**13.20%**
Companies	**760,464,408**	64.68%	**64.68%**
Public Float	**260,081,913**	22.12%	**22.12%**
TOTAL	**1,175,800,000**	100.00%	**100.00%**
Normaciel, S.A. de C.V.	438,796,285	37.32%	
Promociones Monser, S.A. de C.V.	133,504,636	11.35%	
Philae, S.A. de C.V.	58,173,026	4.95%	
Grupo Valacci, S.A. de C.V.	45,947,077	3.91%	
Distribuidora Comercial Senda, S.A. de C.V.	43,740,000	3.72%	
Marlupag, S.A. de C.V.	40,303,384	3.43%	
TOTAL	**760,464,408**	**64.68%**	

Families Servitje, Mata, Jorba & Sendra, through some of the previous companies, either directly or indirectly, have a majoritarian shareholder ownership of Industrias BIMBO, S.A.B DE C.V.

*Fideicomiso Banamex 14483-3 **	42,967,349	3.65%	
*Fideicomiso Banamex 14484-1 **	17,292,657	1.47%	
Main shareholders	94,993,673	8.08%	
TOTAL	**155,253,679**	**13.20%**	

** These two trust are controlled by the family Servitje Montull*
******* *The individual **direct** tenancy of any of these investors does not reach the five percent of the total capital of the company.*

***** Data Annual Rep 05*** ***31/12/2005***

GRUPO BIMBO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,175,800,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,175,800,000**	**100.00%**	**100.00%**
Fam. Servitje, Mata, Jorba & Sendra. *	**150,680,134**	12.82%	**12.82%**
Companies	**762,288,408**	64.83%	**64.83%**
Public Float	**262,831,458**	22.35%	**22.35%**
TOTAL	**1,175,800,000**	100.00%	**100.00%**
Normaciel, S.A. de C.V.	438,796,285	37.32%	
Promociones Monser, S.A. de C.V.	134,854,636	11.47%	
Philae, S.A. de C.V.	58,173,026	4.95%	
Grupo Valacci, S.A. de C.V.	45,947,077	3.91%	
Distribuidora Comercial Senda, S.A. de C.V.	44,214,000	3.76%	
Marlupag, S.A. de C.V.	40,303,384	3.43%	
TOTAL	**762,288,408**	**64.83%**	

Families Servitje, Mata, Jorba & Sendra, through some of the previous companies, either directly or indirectly, have a majoritarian shareholder ownership of Industrias BIMBO, S.A.B DE C.V.

*Fideicomiso Banamex 14483-3 **	44,235,339	3.76%	
*Fideicomiso Banamex 14484-1 **	15,324,667	1.30%	
Main shareholders	91,120,128	7.75%	
TOTAL	**150,680,134**	**12.82%**	

** These two trust are controlled by the family Servitje Montull*
******* *The individual **direct** tenancy of any of these investors does not reach the five percent of the total capital of the company.*

***** Data Annual Rep 04*** ***31/12/2004***

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,175,800,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,175,800,000**	**100.00%**	**100.00%**
Fam. Servitje, Mata, Jorba & Sendra. *	**162,207,580**	13.80%	**13.80%**
Companies	**762,633,810**	64.86%	**64.86%**
Public Float	**250,958,610**	21.34%	**21.34%**
TOTAL	**1,175,800,000**	100.00%	**100.00%**
Normaciel, S.A. de C.V.	438,615,687	37.30%	
Promociones Monser, S.A. de C.V.	134,854,636	11.47%	
Philae, S.A. de C.V.	58,173,026	4.95%	
Grupo Valacci, S.A. de C.V.	45,947,077	3.91%	
Distribuidora Comercial Senda, S.A. de C.V.	44,740,000	3.81%	
Marlupag, S.A. de C.V.	40,303,384	3.43%	
TOTAL	**762,633,810**	**64.86%**	

Families Servitje, Mata, Jorba & Sendra, through some of the previous companies, either directly or indirectly, have a majoritarian shareholder ownership of Industrias BIMBO, S.A.B DE C.V.

*Fideicomiso Banamex 14483-3 **	42,967,349	3.65%	
*Fideicomiso Banamex 14484-1 **	14,270,717	1.21%	
Main shareholders	104,969,514	8.93%	
TOTAL	**162,207,580**	**13.80%**	

** These two trust are controlled by the family Servitje Montull*
******* *The individual **direct** tenancy of any of these investors does not reach the five percent of the total capital of the company.*

***** Data Annual Rep 03*** ***31/12/2003***

GRUPO BIMBO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,175,800,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,175,800,000**	**100.00%**	**100.00%**
Fam. Servitje, Mata, Jorba & Sendra. *	**164,942,149**	14.03%	**14.03%**
Companies	**762,633,810**	64.86%	**64.86%**
Public Float	**248,224,041**	21.11%	**21.11%**
TOTAL	**1,175,800,000**	100.00%	**100.00%**
Normaciel, S.A. de C.V.	438,615,687	37.30%	
Promociones Monser, S.A. de C.V.	134,854,636	11.47%	
Philae, S.A. de C.V.	58,173,026	4.95%	
Grupo Valacci, S.A. de C.V.	45,947,077	3.91%	
Distribuidora Comercial Senda, S.A. de C.V.	44,740,000	3.81%	
Marlupag, S.A. de C.V.	40,303,384	3.43%	
TOTAL	**762,633,810**	**64.86%**	

Families Servitje, Mata, Jorba & Sendra, through some of the previous companies, either directly or indirectly, have a majoritarian shareholder ownership of Industrias BIMBO, S.A.B DE C.V.

*Fideicomiso Banamex 14483-3 **	42,967,349	3.65%	
*Fideicomiso Banamex 14484-1 **	14,270,717	1.21%	
Main shareholders	107,704,083	9.16%	
TOTAL	**164,942,149**	**14.03%**	

** These two trust are controlled by the family Servitje Montull*
******* *The individual **direct** tenancy of any of these investors does not reach the five percent of the total capital of the company.*

***** Data Annual Rep 02*** ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,175,889,069**	82.72%	**100.00%**
Shares in company's treasury	245,710,931	17.28%	0.00%
TOTAL SHARES	**1,421,600,000**	**100.00%**	**100.00%**
Fam. Servitje, Mata, Jorba & Sendra. *	**164,942,149**	14.03%	**14.03%**
Companies	**762,633,810**	64.86%	**64.86%**
Public Float	**248,313,110**	21.12%	**21.12%**
TOTAL	**1,175,889,069**	100.00%	**100.00%**
Normaciel, S.A. de C.V.	438,615,687	37.30%	
Promociones Monser, S.A. de C.V.	134,854,636	11.47%	
Philae, S.A. de C.V.	58,173,026	4.95%	
Grupo Valacci, S.A. de C.V.	45,947,077	3.91%	
Distribuidora Comercial Senda, S.A. de C.V.	44,740,000	3.80%	
Marlupag, S.A. de C.V.	40,303,384	3.43%	
TOTAL	**762,633,810**	**64.86%**	

Families Servitje, Mata, Jorba & Sendra, through some of the previous companies, either directly or indirectly, have a majoritarian shareholder ownership of Industrias BIMBO, S.A.B DE C.V.

*Fideicomiso Banamex 14483-3 **	42,967,349	3.65%	
*Fideicomiso Banamex 14484-1 **	14,270,717	1.21%	
Main shareholders	107,704,083	9.16%	
TOTAL	**164,942,149**	**14.03%**	

** These two trust are controlled by the family Servitje Montull*
******* *The individual **direct** tenancy of any of these investors does not reach the five percent of the total capital of the company.*

***** Data Annual inform 01*** ***31/12/2001***

CEMEX, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	15,778,133,836	66.67%	**66.67%**
Series B Shares *(no par value)*	7,889,066,918	33.33%	**33.33%**
TOTAL SHARES	**23,667,200,754**	**100.00%**	**100.00%**

Executives and Committee members	Series A shares	482,890,832	3.06%	100.00%
	Series B shares	241,445,416		
****Subsidiaries***	CPOS as Shrs A	1,116,400,000	7.08%	0.00%
	CPOS as Shrs B	558,200,000		
Southeastern Asset Management,	ADS as Shrs A	1,099,662,064	6.97%	0.00%
	ADS as Shrs B	549,831,032		
CPOs in Trust	CPOS as Shrs A	3,596,130,278	22.79%	0.00%
	CPOS as Shrs B	1,798,065,139		
ADSs	CPOS as Shrs A	9,483,050,662	60.10%	0.00%
	CPOS as Shrs B	4,741,525,331		
TOTAL	***Series A***	***15,778,133,836***	***100.00%***	***100.00%***
	Series B	***7,889,066,918***		

Each CPO represents two series A shares and one new series B share, while each ADS represents ten CPOs.

All ADSs are deemed to be held by non-Mexican nationals.

The shares acquired through our subsidiaries (by means of CPOs), are voted at the direction of CEMEX management.

*As of March 31, 2007, no individual director or member of the senior management beneficially owned one percent or more of any class of CEMEX outstanding capital stock. However, the senior management and directors and their immediate families owned, collectively, approximately **4.74%** of the outstanding shares, including shares underlying stock options and restricted CPOs under the ESOPs.*

Data AR-06 31/12/2006

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	7,676,623,102	66.67%	**66.67%**
Series B Shares *(no par value)*	3,838,311,511	33.33%	**33.33%**
TOTAL SHARES	**11,514,934,613**	**100.00%**	**100.00%**

Executives and Committee members	Series A shares	247,448,228	3.22%	100.00%
	Series B shares	123,724,074		
****Subsidiaries***	CPOS as Shrs A	627,000,000	8.17%	0.00%
	CPOS as Shrs B	313,500,000		
Southeastern Asset Management,	ADS as Shrs A	777,705,736	10.13%	0.00%
	ADS as Shrs B	388,852,868		
CPOs in Trust	CPOS as Shrs A	1,418,380,716	18.48%	0.00%
	CPOS as Shrs B	709,190,358		
ADSs	CPOS as Shrs A	4,606,088,422	60.00%	0.00%
	CPOS as Shrs B	2,303,044,211		
TOTAL	***Series A***	***7,676,623,102***	***100.00%***	***100.00%***
	Series B	***3,838,311,511***		

Each CPO represents two series A shares and one new series B share, while each ADS represents ten CPOs.

All ADSs are deemed to be held by non-Mexican nationals.

The shares acquired through our subsidiaries (by means of CPOs), are voted at the direction of CEMEX management.

*As of March 31, 2006, no individual director or member of the senior management beneficially owned one percent or more of any class of CEMEX outstanding capital stock. However, the senior management and directors and their immediate families owned, collectively, approximately **3.9%** of the outstanding shares, including shares underlying stock options and restricted CPOs under the ESOPs.*

Data AR-05 31/12/2005

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	3,704,060,248	66.67%	**66.67%**
Series B Shares *(no par value)*	1,852,030,124	33.33%	**33.33%**
TOTAL SHARES	**5,556,090,372**	**100.00%**	**100.00%**

Executives and Committee members	Series A shares	123,717,026	3.34%	100.00%
	Series B shares	61,858,513		
****Subsidiaries***	CPOS as Shrs A	307,600,000	8.30%	0.00%
	CPOS as Shrs B	153,800,000		
Southeastern Asset Management,	ADS as Shrs A	377,978,960	10.20%	0.00%
	ADS as Shrs B	188,989,480		
CPOs in Trust	CPOS as Shrs A	997,182,354	26.92%	0.00%
	CPOS as Shrs B	498,591,177		
ADSs	CPOS as Shrs A	1,897,581,908	51.23%	0.00%
	CPOS as Shrs B	948,790,954		
TOTAL	***Series A***	***3,704,060,248***	***100.00%***	***100.00%***
	Series B	***1,852,030,124***		

*Each CPO represents two series A shares and one new series B share, while each ADS represents **five** CPOs.*

All ADSs are deemed to be held by non-Mexican nationals.

The shares acquired through our subsidiaries (by means of CPOs), are voted at the direction of CEMEX management.

*As of March 31, 2005, no individual director or member of the senior management beneficially owned one percent or more of any class of CEMEX outstanding capital stock. However, the senior management and directors and their immediate families owned, collectively, approximately **6.34%** of the outstanding shares, including shares underlying stock options and restricted CPOs under the ESOPs.*

DataAR-04 31/12/2004

CEMEX, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	3,548,893,516	66.67%	**66.67%**
Series B Shares *(no par value)*	1,774,446,758	33.33%	**33.33%**
TOTAL SHARES	**5,323,340,274**	**100.00%**	**100.00%**

Executives and Committee members	Series A shares	125,002,848	3.52%	100.00%
	Series B shares	62,501,424		
Subsidiaries	CPOS as Shrs A	306,000,000	8.62%	0.00%
	CPOS as Shrs B	153,000,000		
Brandes Investment Partners, LIc.	**ADS as Shrs A**	272,474,030	7.68%	0.00%
	ADS as Shrs B	136,237,015		
CPOs in Trust	CPOS as Shrs A	934,885,645	26.34%	0.00%
	CPOS as Shrs B	467,442,823		
ADSs	CPOS as Shrs A	1,910,530,993	53.83%	0.00%
	CPOS as Shrs B	955,265,496		
TOTAL	***Series A***	***3,548,893,516***	***100.00%***	***100.00%***
	Series B	***1,774,446,758***		

Each CPO represents two series A shares and one new series B share, while each ADS represents ***five*** *CPOs.*

All ADSs are deemed to be held by non-Mexican nationals.

The shares acquired through our subsidiaries (by means of CPOs), are voted at the direction of CEMEX management.

As of March 19, 2004, no individual director or member of the senior management beneficially owned one percent or more of any class of CEMEX outstanding capital stock. However, the senior management and directors and their immediate families owned, collectively, approximately ***5.75%*** *of the outstanding shares, including shares underlying stock options and restricted CPOs under the ESOPs.*

Data AR-03 ***31/12/2003***

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	3,331,308,318	66.67%	**66.67%**
Series B Shares *(no par value)*	1,665,654,159	33.33%	**33.33%**
TOTAL SHARES	**4,996,962,477**	**100.00%**	**100.00%**

Executives and Committee members	Series A shares	186,989,876	5.61%	100.00%
	Series B shares	93,494,938		
Subsidiaries	CPOS as Shrs A	290,000,000	8.71%	0.00%
	CPOS as Shrs B	145,000,000		
CPOs in Trust	CPOS as Shrs A	948,861,466	28.48%	0.00%
	CPOS as Shrs B	474,430,733		
ADSs	CPOS as Shrs A	1,905,456,976	57.20%	0.00%
	CPOS as Shrs B	952,728,488		
TOTAL	***Series A***	***3,331,308,318***	***100.00%***	***100.00%***
	Series B	***1,665,654,159***		

Each CPO represents two series A shares and one new series B share, while each ADS represents ***five*** *CPOs.*

The shares acquired through our subsidiaries (by means of CPOs), are voted at the direction of CEMEX management.

As of December, 2002, no individual director or member of the senior management beneficially owned one percent or more of any class of CEMEX outstanding capital stock, but Mr. Fernando Ruíz Aredondo who owns around 1.88 percent. Furthermore, the senior management and directors and their immediate families owned, collectively, approximately ***5.8%*** *of the outstanding shares, including shares underlying stock options and restricted CPOs under the ESOPs.*

DataAR-02 ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	3,216,936,746	66.67%	**66.67%**
Series B Shares *(no par value)*	1,608,468,373	33.33%	**33.33%**
TOTAL SHARES	**4,825,405,119**	**100.00%**	**100.00%**

Executives and Committee members	Series A shares	198,550,764	6.17%	100.00%
	Series B shares	99,082,391		
Subsidiaries	CPOS as Shrs A	292,000,000	9.08%	0.00%
	CPOS as Shrs B	146,000,000		
CPOs in Trust	CPOS as Shrs A	969,685,340	30.14%	0.00%
	CPOS as Shrs B	484,923,340		
ADSs	CPOS as Shrs A	1,756,700,642	54.61%	0.00%
	CPOS as Shrs B	878,462,642		
TOTAL	***Series A***	***3,216,936,746***	***100.00%***	***100.00%***
	Series B	***1,608,468,373***		

Each CPO represents two series A shares and one new series B share, while each ADS represents ***five*** *CPOs.*

The shares acquired through our subsidiaries (by means of CPOs), are voted at the direction of CEMEX management.

As of March, 2002, no individual director or member of the senior management beneficially owned one percent or more of any class of CEMEX outstanding capital stock, but Mr. Fernando Ruíz Aredondo who owns around 1.83 percent. Furthermore, the senior management and directors and their immediate families owned, collectively, approximately ***6.49%*** *of the outstanding shares, including shares underlying stock options and restricted CPOs under the ESOPs.*

DataAR-01 ***31/12/2001***

CORPORACIÓN INTERAMERICANA DE ENTRETENIMIENTO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*	**359,330,813**	99.94%	**100.00%**
Shares in company's treasury	223,040	0.06%	0.00%
TOTAL SHARES	**359,553,853**	**100.00%**	**100.00%**
Luis Alejandro Soberón Kuri	**86,391,426**	24.04%	**24.04%**
Rodrigo Humberto Gozález Calvillo	**7,000,000**	1.95%	**1.95%**
Federico González Compeán	**7,000,000**	1.95%	**1.95%**
Public Float	**258,939,387**	72.06%	**72.06%**
TOTAL	**359,330,813**	100.00%	**100.00%**

**Even though Mr. Luis Alejandro Soberón Kuri, the founder, and Mr. Rodrigo Humberto González Calvillo and Mr. Federico González Compeán, members of the BOD and Chief Officers, does not own the majority of the capital stock of CIE, it is deemed that they control the company since other investors' shares have been voluntarily voted in the same way as founder shares did.*

***** Data Annual Rep 06*** ***31/12/2006***

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*	**359,330,813**	99.94%	**100.00%**
Shares in company's treasury	223,040	0.06%	0.00%
TOTAL SHARES	**359,553,853**	**100.00%**	**100.00%**
Luis Alejandro Soberón Kuri	**37,693,802**	10.49%	**10.49%**
Rodrigo Gozález Calvillo & Federico González Compeán	**14,013,902**	3.90%	**3.90%**
Centauro Capital, S.A. de C.V.	**30,075,989**	8.37%	**8.37%**
Trust for executives & employees	**4,635,367**	1.29%	**1.29%**
Public Float	**272,911,752**	75.95%	**75.95%**
TOTAL	**359,330,813**	100.00%	**100.00%**

** Mr. Luis Alejandro Soberón Kuri, who is the founder of CIE and the Chairman of its BOD, has the faculty to decide the vote of the shares belonging to Mr. González Calvillo & Mr. González Compeán, Centauro Capital and the "Trust" for Executives and Employees.*

*** Centauro Capital is a company funded by Mr. Luis Alejandro Soberón Kuri, who holds the majority of its shares.*

***** Data Annual Rep 05*** ***31/12/2005***

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*	**359,203,903**	99.90%	**100.00%**
Shares in company's treasury	349,950	0.10%	0.00%
TOTAL SHARES	**359,553,853**	**100.00%**	**100.00%**
Luis Alejandro Soberón Kuri	**37,680,489**	10.49%	**10.49%**
Rodrigo Gozález Calvillo & Federico González Compeán	**14,008,952**	3.90%	**3.90%**
Centauro Capital, S.A. de C.V.	**30,065,367**	8.37%	**8.37%**
Trust for executives & employees	**4,490,049**	1.25%	**1.25%**
Public Float	**272,959,046**	75.99%	**75.99%**
TOTAL	**359,203,903**	100.00%	**100.00%**

** Mr. Luis Alejandro Soberón Kuri, who is the founder of CIE and the Chairman of its BOD, has the faculty to decide the vote of the shares belonging to Mr. González Calvillo & Mr. González Compeán, Centauro Capital and the "Trust" for Executives and Employees.*

*** Centauro Capital is a company funded by Mr. Luis Alejandro Soberón Kuri, who holds the majority of its shares.*

***** Data Annual Rep 04*** ***31/12/2004***

CORPORACIÓN INTERAMERICANA DE ENTRETENIMIENTO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*	**309,203,903**	99.89%	**100.00%**
Shares in company's treasury	349,950	0.11%	0.00%
TOTAL SHARES	**309,553,853**	**100.00%**	**100.00%**
Luis Alejandro Soberón Kuri	**37,691,956**	12.19%	**12.19%**
Trust for Founders	**14,006,937**	4.53%	**4.53%**
Trust for executives & employees	**4,792,660**	1.55%	**1.55%**
Centauro Capital, S.A. de C.V.	**16,758,852**	5.42%	**5.42%**
Public Float	**235,953,498**	76.31%	**76.31%**
TOTAL	**309,203,903**	100.00%	**100.00%**

** Mr. Luis Alejandro Soberón Kuri, who is the founder of CIE and the Chairman of its BOD, has the faculty to decide the vote of the shares under the* ***"Trust for Founders "*** *and the* ***"Trust for Executives and Employees".***

*** Centauro Capital is a company funded by Mr. Luis Alejandro Soberón Kuri, who holds the majority of its shares.*

***** Data Annual Rep 03*** ***31/12/2003***

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*	**309,203,903**	99.89%	**100.00%**
Shares in company's treasury	349,950	0.11%	0.00%
TOTAL SHARES	**309,553,853**	**100.00%**	**100.00%**
Luis Alejandro Soberón Kuri	**37,691,956**	12.19%	**12.19%**
Trust for Founders	**14,006,937**	4.53%	**4.53%**
Trust for executives & employees	**5,040,024**	1.63%	**1.63%**
Centauro Capital, S.A. de C.V.	**16,758,852**	5.42%	**5.42%**
Public Float	**235,706,135**	76.23%	**76.23%**
TOTAL	**309,203,903**	100.00%	**100.00%**

** Mr. Luis Alejandro Soberón Kuri, who is the founder of CIE and the Chairman of its BOD, has the faculty to decide the vote of the shares under the* ***"Trust for Founders "*** *and the* ***"Trust for Executives and Employees".***

*** Centauro Capital is a company funded by Mr. Luis Alejandro Soberón Kuri, who holds the majority of its shares.*

***** Data Annual Rep 02*** ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*	**305,887,520**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**305,887,520**	**100.00%**	**100.00%**
Luis Alejandro Soberón Kuri	**42,212,478**	13.80%	**13.80%**
Trust for Founders	**14,040,237**	4.59%	**4.59%**
Trust for executives & employees	**6,056,573**	1.98%	**1.98%**
Centauro Capital, S.A. de C.V.	**16,579,104**	5.42%	**5.42%**
Public Float	**226,999,129**	74.21%	**74.21%**
TOTAL	**305,887,520**	100.00%	**100.00%**

** Mr. Luis Alejandro Soberón Kuri, who is the founder of CIE and the Chairman of its BOD, has the faculty to decide the vote of the shares under the* ***"Trust for Founders "*** *and the* ***"Trust for Executives and Employees".***

*** Centauro Capital is a company funded by Mr. Luis Alejandro Soberón Kuri, who holds the majority of its shares.*

***** Data Annual Rep 01*** ***31/12/2001***

CORPORACION MOCTEZUMA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**883,991,296**	99.90%	**100.00%**
Shares in company's treasury	896,000	0.10%	0.00%
TOTAL SHARES	**884,887,296**	**100.00%**	**100.00%**
Fresit, B.V.	455,794,944	51.56%	**51.56%**
Antonio Cossio Ariño	88,215,600	9.98%	**9.98%**
Presa Internacional, B.V.	67,064,956	7.59%	**7.59%**
Cemolins International	67,064,948	7.59%	**7.59%**
****Miguel Enrique Esparza Díaz***	20,000	0.00%	**0.00%**
Public Float	205,830,848	23.28%	**23.28%**
TOTAL	**883,991,296**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**883,991,296**	99.90%	**100.00%**
Shares in company's treasury	896,000	0.10%	0.00%
TOTAL SHARES	**884,887,296**	**100.00%**	**100.00%**
Fresit, B.V.	455,794,944	51.56%	**51.56%**
Presa Internacional, B.V.	67,064,956	7.59%	**7.59%**
Cemolins International	67,064,948	7.59%	**7.59%**
Antonio Cossio Ariño	88,215,600	9.98%	**9.98%**
Miguel Enrique Esparza Díaz	20,000	0.00%	**0.00%**
Public Float	205,830,848	23.28%	**23.28%**
TOTAL	**883,991,296**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**220,997,824**	99.90%	**100.00%**
Shares in company's treasury	224,000	0.10%	0.00%
TOTAL SHARES	**221,221,824**	**100.00%**	**100.00%**
Fresit, B.V.	113,948,736	51.56%	**51.56%**
Presa Internacional, B.V.	16,766,239	7.59%	**7.59%**
Cemolins International	16,766,237	7.59%	**7.59%**
Seguros Inbursa, S.A.	14,769,600	6.68%	**6.68%**
Banco Inbursa, S.A./ Telmex	18,622,886	8.43%	**8.43%**
Public Float	40,124,126	18.16%	**18.16%**
TOTAL	**220,997,824**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

CORPORACION MOCTEZUMA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**220,997,824**	99.90%	**100.00%**
Shares in company's treasury	224,000	0.10%	0.00%
TOTAL SHARES	**221,221,824**	**100.00%**	**100.00%**
Fresit, B.V.	113,948,736	51.56%	**51.56%**
Presa Internacional, B.V.	16,766,239	7.59%	**7.59%**
Cemolins International	16,766,237	7.59%	**7.59%**
Seguros Inbursa, S.A.	14,769,600	6.68%	**6.68%**
Fondo Dinámico Inversiones	11,308,019	5.12%	**5.12%**
Banco Inbursa, S.A./ Telmex	18,622,886	8.43%	**8.43%**
Public Float	28,816,107	13.04%	**13.04%**
TOTAL	**220,997,824**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**220,997,824**	99.90%	**100.00%**
Shares in company's treasury	224,000	0.10%	0.00%
TOTAL SHARES	**221,221,824**	**100.00%**	**100.00%**
Fresit, B.V.	113,948,736	51.56%	**51.56%**
Presa Internacional, B.V.	16,766,239	7.59%	**7.59%**
Cemol International	16,766,237	7.59%	**7.59%**
Seguros Inbursa, S.A.	14,769,600	6.68%	**6.68%**
Fondo Dinámico Inversiones	11,308,019	5.12%	**5.12%**
Banco Inbursa, S.A./ Telmex	18,622,886	8.43%	**8.43%**
Public Float	28,816,107	13.04%	**13.04%**
TOTAL	**220,997,824**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**220,997,824**	99.90%	**100.00%**
Shares in company's treasury	224,000	0.10%	0.00%
TOTAL SHARES	**221,221,824**	**100.00%**	**100.00%**
Fresit, B.V.	113,948,736	51.56%	**51.56%**
Presa Internacional, B.V.	16,766,239	7.59%	**7.59%**
Cemol International	16,766,237	7.59%	**7.59%**
Seguros Inbursa, S.A.	14,769,600	6.68%	**6.68%**
Fondo Dinámico Inversiones	11,308,019	5.12%	**5.12%**
Banco Inbursa, S.A./ Telmex	17,838,908	8.07%	**8.07%**
Public Float	29,600,085	13.39%	**13.39%**
TOTAL	**220,997,824**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

GRUPO CONTINENTAL, S.A.B.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series I Shares (no par value)	**750,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**750,000,000**	**100.00%**	**100.00%**
Fam. GROSSMAN	**445,726,006**	59.43%	**59.43%**
Coca-Cola Company	**156,558,000**	20.87%	**20.87%**
Executives	**0**	0.00%	**0.00%**
General Public	**147,715,994**	19.70%	**19.70%**
TOTAL	**750,000,000**	100.00%	**100.00%**
Trusts CONTINENTAL I and CONTINENTAL II**	442,128,106	58.95%	
*** The Coca-Cola Company*	156,558,000	20.87%	
Cynthia H Grossman and Bruce E Grosmman	3,597,900	0.48%	
Jorge A Tirado del Pozo		0.00%	
Marcos Aguilar Romo		0.00%	
Carlos Valdés Govea		0.00%	
Roberto Martinez Garza		0.00%	
Sergio Garza Treviño		0.00%	
Miguel A Rábago Vite		0.00%	
TOTAL	**602,284,006**	**80.30%**	

** Cynthia H Grossman & Bruce E Grossman are the trustees of the trust CONTINENTAL I and the trust CONTINENTAL II. This tenancy was inherited from the funder and majoritarian shareholder Dr Burton E Grossman.*

*** The Coca-Cola company tenancy is through subsidiaries and trusts (i.e. indirect ownership).*

***** Data Annual Rep 06*** ***31/12/2006***

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series I Shares (no par value)	**750,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**750,000,000**	**100.00%**	**100.00%**
Fam. GROSSMAN	**445,726,006**	59.43%	**59.43%**
Coca-Cola Company	**156,558,000**	20.87%	**20.87%**
Executives	**0**	0.00%	**0.00%**
General Public	**147,715,994**	19.70%	**19.70%**
TOTAL	**750,000,000**	100.00%	**100.00%**
Trusts CONTINENTAL I and CONTINENTAL II**	442,128,106	58.95%	
*** The Coca-Cola Company*	156,558,000	20.87%	
Cynthia H Grossman and Bruce E Grosmman	3,597,900	0.48%	
Jorge A Tirado del Pozo		0.00%	
Marcos Aguilar Romo		0.00%	
Carlos Valdés Govea		0.00%	
Roberto Martinez Garza		0.00%	
Sergio Garza Treviño		0.00%	
Miguel A Rábago Vite		0.00%	
TOTAL	**602,284,006**	**80.30%**	

** Cynthia H Grossman & Bruce E Grossman are the trustees of the trust CONTINENTAL I and the trust CONTINENTAL II. This tenancy was inherited from the funder and majoritarian shareholder Dr Burton E Grossman.*

*** The Coca-Cola company tenancy is through subsidiaries and trusts (i.e. indirect ownership).*

***** Data Annual Rep 05*** ***31/12/2005***

GRUPO CONTINENTAL, S.A.B.

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series I Shares (no par value)	**750,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**750,000,000**	**100.00%**	**100.00%**
Fam. GROSSMAN	**445,726,006**	59.43%	**59.43%**
Coca-Cola Company	**156,558,000**	20.87%	**20.87%**
Executives	**0**	0.00%	**0.00%**
General Public	**147,715,994**	19.70%	**19.70%**
TOTAL	**750,000,000**	100.00%	**100.00%**
Trusts CONTINENTAL I and CONTINENTAL II**	442,128,106	58.95%	
*** The Coca-Cola Company*	156,558,000	20.87%	
Cynthia H Grossman and Bruce E Grosmman	3,597,900	0.48%	
Jorge A Tirado del Pozo		0.00%	
Marcos Aguilar Romo		0.00%	
Carlos Valdés Govea		0.00%	
Roberto Martinez Garza		0.00%	
Sergio Garza Treviño		0.00%	
Miguel A Rábago Vite		0.00%	
TOTAL	**602,284,006**	**80.30%**	

** Cynthia H Grossman & Bruce E Grossman are the trustees of the trust CONTINENTAL I and the trust CONTINENTAL II. This tenancy was inherited from the funder and majoritarian shareholder Dr Burton E Grossman.*

*** The Coca-Cola company tenancy is through subsidiaries and trusts (i.e. indirect ownership).*

***** Data Annual Rep 04*** ***31/12/2004***

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series I Shares (no par value)	**750,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**750,000,000**	**100.00%**	**100.00%**
Fam. GROSSMAN	**445,726,006**	59.43%	**59.43%**
Coca-Cola Company	**156,558,000**	20.87%	**20.87%**
Executives	**0**	0.00%	**0.00%**
General Public	**147,715,994**	19.70%	**19.70%**
TOTAL	**750,000,000**	100.00%	**100.00%**
Trusts CONTINENTAL I and CONTINENTAL II**	442,128,106	58.95%	
*** The Coca-Cola Company*	156,558,000	20.87%	
Cynthia H Grossman and Bruce E Grosmman	3,597,900	0.48%	
Jorge A Tirado del Pozo		0.00%	
Marcos Aguilar Romo		0.00%	
Carlos Valdés Govea		0.00%	
Roberto Martinez Garza		0.00%	
Sergio Garza Treviño		0.00%	
Miguel A Rábago Vite		0.00%	
TOTAL	**602,284,006**	**80.30%**	

** Cynthia H Grossman & Bruce E Grossman are the trustees of the trust CONTINENTAL I and the trust CONTINENTAL II. This tenancy was inherited from the funder and majoritarian shareholder Dr Burton E Grossman.*

*** The Coca-Cola company tenancy is through subsidiaries and trusts (i.e. indirect ownership).*

***** Data Annual Rep 03*** ***31/12/2003***

GRUPO CONTINENTAL, S.A.B.

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series I Shares (no par value)	**749,980,000**	100.00%	**100.00%**
Shares in company's treasury	20,000	0.00%	0.00%
TOTAL SHARES	**750,000,000**	**100.00%**	**100.00%**
Fam. GROSSMAN	**445,726,006**	59.43%	**59.43%**
Coca-Cola Company	**156,558,000**	20.87%	**20.87%**
Executives	**0**	0.00%	**0.00%**
General Public	**147,695,994**	19.69%	**19.69%**
TOTAL	**749,980,000**	100.00%	**100.00%**
Trusts CONTINENTAL I and CONTINENTAL II**	442,128,106	58.95%	
*** The Coca-Cola Company*	156,558,000	20.87%	
Cynthia H Grossman and Bruce E Grosmman	3,597,900	0.48%	
Jorge A Tirado del Pozo		0.00%	
Marcos Aguilar Romo		0.00%	
Carlos Valdés Govea		0.00%	
Roberto Martinez Garza		0.00%	
Sergio Garza Treviño		0.00%	
Miguel A Rábago Vite		0.00%	
TOTAL	**602,284,006**	**80.31%**	

** Cynthia H Grossman & Bruce E Grossman are the trustees of the trust CONTINENTAL I and the trust CONTINENTAL II. This tenancy was inherited from the funder and majoritarian shareholder Dr Burton E Grossman.*

*** The Coca-Cola company tenancy is through subsidiaries and trusts (i.e. indirect ownership).*

***** Data Annual Rep 02*** ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series I Shares *(no par value)*	**748,713,200**	99.83%	**100.00%**
Shares in company's treasury	1,286,800	0.17%	0.00%
TOTAL SHARES	**750,000,000**	**100.00%**	**100.00%**
Fam. GROSSMAN	**445,726,006**	59.53%	**59.53%**
Coca-Cola Company	**156,558,000**	20.91%	**20.91%**
Executives	**3,804,800**	0.51%	**0.51%**
General Public	**142,624,394**	19.05%	**19.05%**
TOTAL	**748,713,200**	100.00%	**100.00%**
Trusts CONTINENTAL I and CONTINENTAL II**	442,128,106	59.05%	
*** The Coca-Cola Company*	156,558,000	20.91%	
Cynthia H Grossman and Bruce E Grosmman	3,597,900	0.48%	
Jorge A Tirado del Pozo	2,194,000	0.29%	
Marcos Aguilar Romo	1,375,500	0.18%	
Carlos Valdés Govea	177,000	0.02%	
Roberto Martinez Garza	34,000	0.00%	
Sergio Garza Treviño	21,300	0.00%	
Miguel A Rábago Vite	3,000	0.00%	
TOTAL	**606,088,806**	**80.95%**	

** Cynthia H Grossman & Bruce E Grossman are the trustees of the trust CONTINENTAL I and the trust CONTINENTAL II. This tenancy was inherited from the funder and majoritarian shareholder Dr Burton E Grossman.*

*** The Coca-Cola company tenancy is through subsidiaries and trusts (i.e. indirect ownership).*

***** Data Annual Report 01*** ***31/12/2001***

GRUPO ELEKTRA, S.A. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**238,885,114**	84.03%	**100.00%**
Shares in company's treasury	45,406,050	15.97%	0.00%
TOTAL SHARES	**284,291,164**	**100.00%**	**100.00%**
Controlling Shareholders	174,096,844	72.88%	**72.88%**
Executives and Committee Members	33,941	0.01%	**0.01%**
GDS	0	0.00%	**0.00%**
Public Float	64,754,329	27.11%	**27.11%**
TOTAL	**238,885,114**	100.00%	**100.00%**

The controlling beneficial shareholders of our company are the heirs of Mr. Hugo Salinas Rocha, which includes Mr. Ricardo B. Salinas, Mr. Hugo Salinas Price and Mrs.Esther Pliego de Salinas (collectively, the "Controlling Shareholders").

Data Annual Rep 06 ***Jun-07***

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**236,102,147**	83.05%	**100.00%**
Shares in company's treasury	48,189,017	16.95%	0.00%
TOTAL SHARES	**284,291,164**	**100.00%**	**100.00%**
Controlling Shareholders	176,969,944	74.95%	**74.95%**
Executives and Committee Members	11,219,366	4.75%	**4.75%**
GDS	0	0.00%	**0.00%**
Public Float	47,912,837	20.29%	**20.29%**
TOTAL	**236,102,147**	100.00%	**100.00%**

The controlling beneficial shareholders of our company are the heirs of Mr. Hugo Salinas Rocha, which includes Mr. Ricardo B. Salinas, Mr. Hugo Salinas Price and Mrs.Esther Pliego de Salinas (collectively, the "Controlling Shareholders").

Data Annual Rep 05 ***Jun-06***

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**232,220,938**	80.46%	**100.00%**
Shares in company's treasury	56,409,666	19.54%	0.00%
TOTAL SHARES	**288,630,604**	**100.00%**	**100.00%**
Controlling Shareholders	172,564,041	74.31%	**79.99%**
Executives and Committee Members	24,583,114	10.59%	**11.40%**
GDS	16,496,440	7.10%	**0.00%**
Public Float	18,577,343	8.00%	**8.61%**
TOTAL	**232,220,938**	100.00%	**100.00%**

The controlling beneficial shareholders of our company are the heirs of Mr. Hugo Salinas Rocha, which includes Mr. Ricardo B. Salinas, Mr. Hugo Salinas Price and Mrs.Esther Pliego de Salinas (collectively, the "Controlling Shareholders").

Data Annual Rep 04 ***Jun-05***

GRUPO ELEKTRA, S.A. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**237,040,833**	82.13%	**100.00%**
Shares in company's treasury	51,589,771	17.87%	0.00%
TOTAL SHARES	**288,630,604**	**100.00%**	**100.00%**
Controlling Shareholders	169,404,141	71.47%	**77.31%**
Executives and Committee Members	45,205,207	19.07%	**20.63%**
GDS	17,926,864	7.56%	**0.00%**
Public Float	4,504,621	1.90%	**2.06%**
TOTAL	**237,040,833**	100.00%	**100.00%**

The controlling beneficial shareholders of our company are the heirs of Mr. Hugo Salinas Rocha, which includes Mr. Ricardo B. Salinas, Mr. Hugo Salinas Price and Mrs.Esther Pliego de Salinas (collectively, the "Controlling Shareholders").

Data Annual Rep 03 ***Jun-04***

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**241,590,634**	83.70%	**100.00%**
Shares in company's treasury	47,039,970	16.30%	0.00%
TOTAL SHARES	**288,630,604**	**100.00%**	**100.00%**
Controlling Shareholders	168,533,626	69.76%	**75.47%**
Executives and Committee Members	39,903,095	16.52%	**17.87%**
GDS	18,283,844	7.57%	**0.00%**
Public Float	14,870,069	6.16%	**6.66%**
TOTAL	**241,590,634**	100.00%	**100.00%**

The controlling beneficial shareholders of our company are the heirs of Mr. Hugo Salinas Rocha, which includes Mr. Ricardo B. Salinas, Mr. Hugo Salinas Price and Mrs.Esther Pliego de Salinas (collectively, the "Controlling Shareholders").

Data Annual Rep 02 ***Jun-03***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**1,249,147,610**	34.40%	**38.43%**
Series B Shares *(no par value)*	**2,001,705,795**	55.12%	**61.57%**
Series L Shares *(no par value)*	**380,535,321**	10.48%	0.00%
TOTAL SHARES	**3,631,388,726**	**100.00%**	**100.00%**
Controlling Shareholders	2,231,994,468	61.46%	**78.75%**
*****CPOs***	256,312,260	7.06%	**0.00%**
GDS	256,312,260	7.06%	**0.00%**
Public Float	886,769,738	24.42%	**21.25%**
TOTAL	**3,631,388,726**	100.00%	**100.00%**

The controlling beneficial shareholders of our company are the heirs of Mr. Hugo Salinas Rocha, which includes Mr. Ricardo B. Salinas, Mr. Hugo Salinas Price and Mrs.Esther Pliego de Salinas (collectively, the "Controlling Shareholders").

Data Annual Rep 01 ***Feb-02***

FOMENTO ECONÓMICO MEXICANO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares		no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*		9,246,420,270	51.68%	**100.00%**
Sub-series DB Shares *(no par value)*		4,322,355,540	24.16%	**0.00%**
Sub-series DL Shares *(no par value)*		4,322,355,540	24.16%	**0.00%**
TOTAL SHARES		**17,891,131,350**	**100.00%**	**100.00%**
Trust "Voting"	Series B	6,914,592,885	38.65%	**85.35%**
	Subseries DB	0		
	Subseries DL	0		
Members of the BOD	Series B	104,143,407	1.43%	**1.29%**
	Subseries DB	75,817,764		
	Subseries DL	75,817,764		
ADRs	Series B	1,145,424,218	32.01%	**0.00%**
	Subseries DB	2,290,848,436		
	Subseries DL	2,290,848,436		
Shares Public Float	Series B	1,082,259,760	27.91%	**13.36%**
	Subseries DB	1,955,689,340		
	Subseries DL	1,955,689,340		
TOTAL	**Series B**	***9,246,420,270***	***100.000%***	***100.000%***
	Subseries DB	***4,322,355,540***		
	Subseries DL	***4,322,355,540***		

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares		no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*		3,082,140,090	51.68%	**100.00%**
Sub-series DB Shares *(no par value)*		1,440,785,180	24.16%	**0.00%**
Sub-series DL Shares *(no par value)*		1,440,785,180	24.16%	**0.00%**
TOTAL SHARES		**5,963,710,450**	**100.00%**	**100.00%**
Trust "Voting"	Series B	2,211,344,965	37.08%	**81.89%**
	Subseries DB	0		
	Subseries DL	0		
Members of the BOD	Series B	33,894,053	1.43%	**1.26%**
	Subseries DB	25,682,796		
	Subseries DL	25,682,796		
ADRs	Series B	381,808,073	32.01%	**0.00%**
	Subseries DB	763,616,145		
	Subseries DL	763,616,145		
Shares Public Float	Series B	455,092,999	29.48%	**16.85%**
	Subseries DB	651,486,239		
	Subseries DL	651,486,239		
TOTAL	**Series B**	***3,082,140,090***	***100.000%***	***100.000%***
	Subseries DB	***1,440,785,180***		
	Subseries DL	***1,440,785,180***		

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares		no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares *(no par value)*		2,737,740,090	51.68%	**100.00%**
Sub-series DB Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
Sub-series DL Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
TOTAL SHARES		**5,297,310,450**	**100.00%**	**100.00%**
Trust "Voting"	Series B	1,926,075,625	36.36%	**84.71%**
	Subseries DB	0		
	Subseries DL	0		
Members of the BOD	Series B	64,955,675	1.91%	**2.86%**
	Subseries DB	18,133,710		
	Subseries DL	18,133,710		
ADRs	Series B	463,922,128	43.79%	**0.00%**
	Subseries DB	927,844,256		
	Subseries DL	927,844,256		
Shares Public Float	Series B	282,786,662	17.94%	**12.44%**
	Subseries DB	333,807,215		
	Subseries DL	333,807,215		
TOTAL	**Series B**	***2,737,740,090***	***100.000%***	***100.000%***
	Subseries DB	***1,279,785,180***		
	Subseries DL	***1,279,785,180***		

The following table sets forth the individual share ownership NOT aggregated into the ***trust Voting****, but that also belongs to the* ***members of the BOD forming this trust.***

Eugenio Garza Laguera	Series B	13,440,804		
	Subseries DB	26,654,808	0.37%	**0.15%**
	Subseries DL	26,654,808		
José Calderón Rojas	Series B	7,491,102		
	Subseries DB	14,976,204	0.21%	**0.08%**
	Subseries DL	14,976,204		
Consuelo Garza de Garza	Series B	69,401,775		
	Subseries DB	12,754,950	0.53%	**0.75%**
	Subseries DL	12,754,950		
Max Michael Suberville	Series B	5,151,345		
	Subseries DB	10,302,690	0.14%	**0.06%**
	Subseries DL	10,302,690		
Alberto Bailleres	Series B	8,658,381		
	Subseries DB	11,129,112	0.17%	**0.09%**
	Subseries DL	11,129,112		
	Series B	***104,143,407***		
TOTAL	**Subseries DB**	***75,817,764***	***1.43%***	***1.13%***
	Subseries DL	***75,817,764***		

Data AR-06 ***31/12/2006***

The following table sets forth the individual share ownership NOT aggregated into the ***trust Voting****, but that also belongs to the* ***members of the BOD forming this trust.***

Eugenio Garza Laguera	Series B	4,480,268		
	Subseries DB	8,884,936	0.37%	**0.15%**
	Subseries DL	8,884,936		
José Calderón Rojas	Series B	2,497,034		
	Subseries DB	4,992,068	0.21%	**0.08%**
	Subseries DL	4,992,068		
Consuelo Garza de Garza	Series B	23,133,925		
	Subseries DB	4,251,650	0.53%	**0.75%**
	Subseries DL	4,251,650		
Max Michael Suberville	Series B	1,717,115		
	Subseries DB	3,434,230	0.14%	**0.06%**
	Subseries DL	3,434,230		
Alberto Bailleres	Series B	2,065,711		
	Subseries DB	4,119,912	0.17%	**0.07%**
	Subseries DL	4,119,912		
	Series B	***33,894,053***		
TOTAL	**Subseries DB**	***25,682,796***	***1.43%***	***1.10%***
	Subseries DL	***25,682,796***		

Data AR-05 ***31/12/2005***

The following table sets forth the individual share ownership NOT aggregated into the ***trust Voting****, but that also belongs to the* ***members of the BOD forming this trust.***

Eugenio Garza Laguera	Series B	4,954,368		
	Subseries DB	8,881,736	0.43%	**0.18%**
	Subseries DL	8,881,736		
José Calderón Rojas	Series B	2,276,517		
	Subseries DB	4,553,034	0.21%	**0.08%**
	Subseries DL	4,553,034		
Consuelo Garza de Garza	Series B	20,821,980		
	Subseries DB	4,031,160	0.55%	**0.76%**
	Subseries DL	4,031,160		
Max Michael Suberville	Series B	36,568,920		
	Subseries DB	0	0.69%	**1.34%**
	Subseries DL	0		
Alberto Bailleres	Series B	333,890		
	Subseries DB	667,780	0.03%	**0.01%**
	Subseries DL	667,780		
	Series B	***64,955,675***		
TOTAL	**Subseries DB**	***18,133,710***	***1.91%***	***2.37%***
	Subseries DL	***18,133,710***		

Data AR-04 ***31/12/2004***

FOMENTO ECONÓMICO MEXICANO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*		2,737,740,090	51.68%	**100.00%**
Sub-series DB Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
Sub-series DL Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
TOTAL SHARES		**5,297,310,450**	**100.00%**	**100.00%**
Trust "Voting"	Series B	1,907,373,675		
	Subseries DB	0	36.01%	**79.71%**
	Subseries DL	0		
Members of the BOD	Series B	83,144,125		
	Subseries DB	18,133,710	2.25%	**3.57%**
	Subseries DL	18,133,710		
Capital International, Inc.	Series B	65,282,220		
	Subseries DB	30,564,440	2.39%	**0.00%**
	Subseries DL	30,564,440		
ADRs	Series B	344,964,132		
	Subseries DB	820,492,705	37.49%	**0.00%**
	Subseries DL	820,492,705		
Shares Public Float	Series B	336,975,938		
	Subseries DB	410,594,325	21.86%	**14.48%**
	Subseries DL	410,594,325		
TOTAL	**Series B**	***2,737,740,090***		
	Subseries DB	***1,279,785,180***	***100.000%***	***97.764%***
	Subseries DL	***1,279,785,180***		

SHARE OWNERSHIP STRUCTURE 2002				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*		2,737,740,090	51.68%	**100.00%**
Sub-series DB Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
Sub-series DL Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
TOTAL SHARES		**5,297,310,450**	**100.00%**	**100.00%**
Trust "Voting"	Series B	1,473,334,215		
	Subseries DB	0	27.81%	**58.86%**
	Subseries DL	0		
Members of the BOD	Series B	154,421,535		
	Subseries DB	18,133,710	3.60%	**6.17%**
	Subseries DL	18,133,710		
Capital International, Inc.	Series B	94,582,020		
	Subseries DB	189,164,040	8.93%	**3.78%**
	Subseries DL	189,164,040		
ADRs	Series B	234,444,855		
	Subseries DB	658,053,749	29.27%	**0.00%**
	Subseries DL	658,053,749		
Shares Public Float	Series B	780,957,465		
	Subseries DB	414,433,681	30.39%	**31.20%**
	Subseries DL	414,433,681		
TOTAL	**Series B**	***2,737,740,090***		
	Subseries DB	***1,279,785,180***	***100.000%***	***100.000%***
	Subseries DL	***1,279,785,180***		

SHARE OWNERSHIP STRUCTURE 2001				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*		2,737,740,090	51.68%	**100.00%**
Sub-series DB Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
Sub-series DL Shares *(no par value)*		1,279,785,180	24.16%	**0.00%**
TOTAL SHARES		**5,297,310,450**	**100.00%**	**100.00%**
Trust "Voting"	Series B	1,493,648,070		
	Subseries DB	0	28.20%	**58.90%**
	Subseries DL	0		
Members of the BOD	Series B	66,567,240		
	Subseries DB	38,452,540	2.71%	**2.62%**
	Subseries DL	38,452,540		
Capital International, Inc.	Series B	95,857,320		
	Subseries DB	191,714,640	9.05%	**3.78%**
	Subseries DL	191,714,640		
ADRs	Series B	201,819,303		
	Subseries DB	595,353,246	26.29%	**0.00%**
	Subseries DL	595,353,246		
Shares Public Float	Series B	879,848,157		
	Subseries DB	454,264,754	33.76%	**34.70%**
	Subseries DL	454,264,754		
TOTAL	**Series B**	***2,737,740,090***		
	Subseries DB	***1,279,785,180***	***100.000%***	***100.000%***
	Subseries DL	***1,279,785,180***		

The following table sets forth the individual share ownership NOT aggregated into the ***trust Voting****, but that also belongs to the* ***members of the BOD forming this trust.***

Eugenio Garza Laguera	Series B	4,440,868		
	Subseries DB	8,881,736	0.42%	**0.16%**
	Subseries DL	8,881,736		
José Calderón Rojas	Series B	2,276,517		
	Subseries DB	4,553,034	0.21%	**0.08%**
	Subseries DL	4,553,034		
Consuelo Garza de Garza	Series B	20,821,980		
	Subseries DB	4,031,160	0.55%	**0.76%**
	Subseries DL	4,031,160		
Max Michael Suberville	Series B	55,270,870		
	Subseries DB	0	1.04%	**2.02%**
	Subseries DL	0		
Alberto Bailleres	Series B	333,890		
	Subseries DB	667,780	0.03%	**0.01%**
	Subseries DL	667,780		
TOTAL	**Series B**	***83,144,125***		
	Subseries DB	***18,133,710***	***2.25%***	***3.04%***
	Subseries DL	***18,133,710***		

Data AR-03 ***31/12/2003***

The following table sets forth the individual share ownership NOT aggregated into the ***trust Voting****, but that also belongs to the* ***members of the BOD forming this trust.***

Eugenio Garza Laguera	Series B	38,956,978		
	Subseries DB	8,881,736	1.07%	**1.42%**
	Subseries DL	8,881,736		
José Calderón Rojas	Series B	42,989,332		
	Subseries DB	4,553,034	0.98%	**1.57%**
	Subseries DL	4,553,034		
Consuelo Garza de Garza	Series B	11,011,980		
	Subseries DB	4,031,160	0.36%	**0.40%**
	Subseries DL	4,031,160		
Max Michael Suberville	Series B	55,270,870		
	Subseries DB	0	1.04%	**2.02%**
	Subseries DL	0		
Alberto Bailleres	Series B	6,192,375		
	Subseries DB	667,780	0.14%	**0.23%**
	Subseries DL	667,780		
TOTAL	**Series B**	***154,421,535***		
	Subseries DB	***18,133,710***	***3.60%***	***5.64%***
	Subseries DL	***18,133,710***		

Data AR-03 ***31/12/2003***

The following table sets forth the individual share ownership NOT aggregated into the ***trust Voting****, but that also belongs to the* ***members of the BOD forming this trust.***

Eugenio Garza Laguera	Series B	1,362,310		
	Subseries DB	5,320	0.03%	**0.05%**
	Subseries DL	5,320		
José Calderón Rojas	Series B	10,419,080		
	Subseries DB	20,838,160	0.98%	**0.38%**
	Subseries DL	20,838,160		
Consuelo Garza de Garza	Series B	11,011,980		
	Subseries DB	4,031,160	0.36%	**0.40%**
	Subseries DL	4,031,160		
Max Michael Suberville	Series B	42,270,176		
	Subseries DB	10,570,512	1.20%	**1.54%**
	Subseries DL	10,570,512		
Alberto Bailleres	Series B	1,503,694		
	Subseries DB	3,007,388	0.14%	**0.05%**
	Subseries DL	3,007,388		
TOTAL	**Series B**	***66,567,240***		
	Subseries DB	***38,452,540***	***2.71%***	***2.43%***
	Subseries DL	***38,452,540***		

Data AR-03 ***31/12/2003***

GRUPO CARSO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**2,336,728,700**	85.13%	**100.00%**
Shares in company's treasury	408,271,300	14.87%	0.00%
TOTAL SHARES	**2,745,000,000**	**100.00%**	**100.00%**
Family Slim	**1,015,343,329**	**43.45%**	**65.18%**
ADRs	778,909,567	33.33%	**0.00%**
Public Float	542,475,804	23.22%	**34.82%**
TOTAL	**2,336,728,700**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**2,345,144,900**	85.43%	**100.00%**
Shares in company's treasury	399,855,100	14.57%	0.00%
TOTAL SHARES	**2,745,000,000**	**100.00%**	**100.00%**
Family Slim	**1,014,304,429**	**43.25%**	**64.88%**
ADRs	781,714,967	33.33%	**0.00%**
Public Float	549,125,504	23.42%	**35.12%**
TOTAL	**2,345,144,900**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**2,384,620,254**	86.87%	**100.00%**
Shares in company's treasury	360,379,746	13.13%	0.00%
TOTAL SHARES	**2,745,000,000**	**100.00%**	**100.00%**
Family Slim	**1,063,790,778**	**44.61%**	**66.92%**
ADRs	794,873,418	33.33%	**0.00%**
Public Float	525,956,058	22.06%	**33.08%**
TOTAL	**2,384,620,254**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

GRUPO CARSO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**837,460,500**	100.00%	**100.00%**
Shares in company's treasury	77,539,500	9.26%	0.00%
TOTAL SHARES	**915,000,000**	**109.26%**	**100.00%**
Family Slim	**326,757,232**	**39.02%**	**58.53%**
ADRs	279,153,500	33.33%	**0.00%**
Public Float	231,549,768	27.65%	**41.47%**
TOTAL	**837,460,500**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**866,065,800**	94.65%	**100.00%**
Shares in company's treasury	48,934,200	5.35%	0.00%
TOTAL SHARES	**915,000,000**	**100.00%**	**100.00%**
Family Slim	**317,221,400**	**36.63%**	**54.94%**
ADRs	288,688,600	33.33%	**0.00%**
Public Float	260,155,800	30.04%	**45.06%**
TOTAL	**866,065,800**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**890,250,000**	97.30%	**100.00%**
Shares in company's treasury	24,750,000	2.70%	0.00%
TOTAL SHARES	**915,000,000**	**100.00%**	**100.00%**
Family Slim	**158,758,492**	**17.83%**	**34.19%**
ADRs	425,947,918	47.85%	**0.00%**
Public Float	305,543,590	34.32%	**65.81%**
TOTAL	**890,250,000**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

GRUPO CEMENTOS DE CHIHUAHUA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**327,403,598**	97.04%	**100.00%**
Shares in company's treasury	9,996,402	2.96%	0.00%
TOTAL SHARES	**337,400,000**	**100.00%**	**0.00%**
CAMSA	**250,000,000**	76.36%	**76.36%**
Public Float	77,403,598	23.64%	**23.64%**
TOTAL	**327,403,598**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**331,294,198**	98.19%	**100.00%**
Shares in company's treasury	6,105,802	1.81%	0.00%
TOTAL SHARES	**337,400,000**	**100.00%**	**0.00%**
CAMSA	**250,000,000**	75.46%	**75.46%**
Public Float	81,294,198	24.54%	**24.54%**
TOTAL	**331,294,198**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**334,204,598**	99.05%	**100.00%**
Shares in company's treasury	3,195,402	0.95%	0.00%
TOTAL SHARES	**337,400,000**	**100.00%**	**0.00%**
CAMSA	**250,000,000**	74.80%	**74.80%**
Public Float	84,204,598	25.20%	**25.20%**
TOTAL	**334,204,598**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

GRUPO CEMENTOS DE CHIHUAHUA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**333,845,507**	98.95%	**100.00%**
Shares in company's treasury	3,554,493	1.05%	0.00%
TOTAL SHARES	**337,400,000**	**100.00%**	**0.00%**
CAMSA	**250,000,000**	74.88%	**74.88%**
Public Float	83,845,507	25.12%	**25.12%**
TOTAL	**333,845,507**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**332,185,007**	98.45%	**100.00%**
Shares in company's treasury	5,214,993	1.55%	0.00%
TOTAL SHARES	**337,400,000**	**100.00%**	**0.00%**
CAMSA	**250,000,000**	75.26%	**75.26%**
Public Float	82,185,007	24.74%	**24.74%**
TOTAL	**332,185,007**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**332,185,007**	98.45%	**100.00%**
Shares in company's treasury	5,214,993	1.55%	0.00%
TOTAL SHARES	**337,400,000**	**100.00%**	**0.00%**
CAMSA	**250,000,000**	75.26%	**75.26%**
Public Float	82,185,007	24.74%	**24.74%**
TOTAL	**332,185,007**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

CORPORACION GEO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**531,719,655**	100.00%	**100.00%**
Shares in company's treasury	23,400	0.00%	0.00%
TOTAL SHARES	**531,743,055**	**100.00%**	**100.00%**
Controlling Group	**83,607,540**	**15.72%**	**15.99%**
CPOs	0	0.00%	**0.00%**
ADRs & GDSs	8,799,000	1.65%	**0.00%**
Public Float	439,313,115	82.62%	**84.01%**
TOTAL	**531,719,655**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**536,322,667**	99.98%	**100.00%**
Shares in company's treasury	112,100	0.02%	0.00%
TOTAL SHARES	**536,434,767**	**100.00%**	**100.00%**
Controlling Group	**103,483,077**	**19.29%**	**19.62%**
CPOs	0	0.00%	**0.00%**
ADRs & GDSs	8,799,000	1.64%	**0.00%**
Public Float	424,040,590	79.06%	**80.38%**
TOTAL	**536,322,667**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**532,711,159**	100.00%	**100.00%**
Shares in company's treasury	2,600	0.00%	0.00%
TOTAL SHARES	**532,713,759**	**100.00%**	**100.00%**
Controlling Group	**118,288,456**	**22.20%**	**23.10%**
CPOs	2,720,000	0.51%	**0.00%**
ADRs & GDSs	8,799,000	1.65%	**0.00%**
Public Float	402,903,703	75.63%	**76.90%**
TOTAL	**532,711,159**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

CORPORACION GEO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**104,373,833**	99.85%	**100.00%**
Shares in company's treasury	161,000	0.15%	0.00%
TOTAL SHARES	**104,534,833**	**100.00%**	**100.00%**
Controlling Group	**27,855,514**	**26.69%**	**33.74%**
CPOs	4,390,000	4.21%	**0.00%**
ADRs & GDSs	8,799,000	8.43%	**0.00%**
Public Float	63,329,319	60.68%	**66.26%**
TOTAL	**104,373,833**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**102,392,313**	99.00%	**100.00%**
Shares in company's treasury	1,034,500	1.00%	0.00%
TOTAL SHARES	**103,426,813**	**100.00%**	**100.00%**
Controlling Group	**34,372,556**	**33.57%**	**39.58%**
CPOs	2,670,000	2.61%	**0.00%**
ADRs & GDSs	8,799,000	8.59%	**0.00%**
Public Float	56,550,757	55.23%	**60.42%**
TOTAL	**102,392,313**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**100,472,530**	99.98%	**100.00%**
Shares in company's treasury	23,400	0.02%	0.00%
TOTAL SHARES	**100,495,930**	**100.00%**	**100.00%**
Controlling Group	**34,372,556**	**34.21%**	**41.86%**
CPOs	4,000,000	3.98%	**0.00%**
ADRs & GDSs	8,799,000	8.76%	**0.00%**
Public Float	57,300,974	57.03%	**62.51%**
TOTAL	**104,472,530**	**103.98%**	**104.36%**
***** Data Annual Rep 01***	***31/12/2001***		

GRUPO GIGANTE, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**925,047,006**	94.16%	**100.00%**
Shares in company's treasury	57,342,871	5.84%	0.00%
TOTAL SHARES	**982,389,877**	**100.00%**	**100.00%**
Angel Losada Moreno	123,031,252	13.30%	13.30%
Ma Teresa Losada Moreno	123,031,252	13.30%	13.30%
Rosa Ma Losada Moreno	123,031,252	13.30%	13.30%
Angel Losada Gomez	111,005,641	12.00%	12.00%
Braulio Antonio Arsuaga Losada	40,702,068	4.40%	4.40%
Ma Pilar Arsuaga Losada	40,702,068	4.40%	4.40%
Ana Ma Arsuaga Losada	40,702,068	4.40%	4.40%
Family LOSADA	**602,205,601**	**65.10%**	**65.10%**
Lomoinvest, S.A. de C.V.	28,676,457	3.10%	3.10%
BANCO NACIONAL DE MEXICO	146,157,427	15.80%	15.80%
Inbursa Trust	76,778,901	8.30%	8.30%
Public Float	71,228,619	7.70%	7.70%
TOTAL	**925,047,006**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**925,452,206**	94.18%	**100.00%**
Shares in company's treasury	57,140,271	5.82%	0.00%
TOTAL SHARES	**982,592,477**	**100.00%**	**100.00%**
Angel Losada Moreno	123,085,143	13.30%	13.30%
Ma Teresa Losada Moreno	123,085,143	13.30%	13.30%
Rosa Ma Losada Moreno	123,085,143	13.30%	13.30%
Angel Losada Gomez	111,054,265	12.00%	12.00%
Braulio Antonio Arsuaga Losada	40,719,897	4.40%	4.40%
Ma Pilar Arsuaga Losada	40,719,897	4.40%	4.40%
Ana Ma Arsuaga Losada	40,719,897	4.40%	4.40%
Family LOSADA	**602,469,386**	**65.10%**	**65.10%**
Lomoinvest, S.A. de C.V.	28,689,018	3.10%	3.10%
BANCO NACIONAL DE MEXICO	146,221,449	15.80%	15.80%
Inbursa Trust	76,812,533	8.30%	8.30%
Public Float	71,259,820	7.70%	7.70%
TOTAL	**925,452,206**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**915,557,206**	93.65%	**100.00%**
Shares in company's treasury	62,087,771	6.35%	0.00%
TOTAL SHARES	**977,644,977**	**100.00%**	**100.00%**
Angel Losada Moreno	121,769,108	13.30%	13.30%
Ma Teresa Losada Moreno	121,769,108	13.30%	13.30%
Rosa Ma Losada Moreno	121,769,108	13.30%	13.30%
Angel Losada Gomez	109,866,865	12.00%	12.00%
Braulio Antonio Arsuaga Losada	40,284,517	4.40%	4.40%
Ma Pilar Arsuaga Losada	40,284,517	4.40%	4.40%
Ana Ma Arsuaga Losada	40,284,517	4.40%	4.40%
Family LOSADA	**596,027,741**	**65.10%**	**65.10%**
****Lomoinvest, S.A. de C.V.***	28,382,273	3.10%	3.10%
BANCO NACIONAL DE MEXICO	144,658,039	15.80%	15.80%
Inbursa Trust	75,991,248	8.30%	8.30%
Public Float	70,497,905	7.70%	7.70%
TOTAL	**915,557,206**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

**FAMILY LOSADA owns Lomoinvest, S.A. de C.V.*

GRUPO GIGANTE, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**915,162,262**	93.63%	**100.00%**
Shares in company's treasury	62,285,243	6.37%	0.00%
TOTAL SHARES	**977,447,505**	**100.00%**	**100.00%**
Angel Losada Moreno	122,631,743	13.40%	13.40%
Ma Teresa Losada Moreno	122,631,743	13.40%	13.40%
Rosa Ma Losada Moreno	122,631,743	13.40%	13.40%
Angel Losada Gomez	110,734,634	12.10%	12.10%
Braulio Antonio Arsuaga Losada	41,182,302	4.50%	4.50%
Ma Pilar Arsuaga Losada	41,182,302	4.50%	4.50%
Ana Ma Arsuaga Losada	41,182,302	4.50%	4.50%
Family LOSADA	**602,176,768**	**65.80%**	**65.80%**
Lomoinvest, S.A. de C.V.	28,370,030	3.10%	3.10%
BANCO NACIONAL DE MEXICO	90,601,064	9.90%	9.90%
Inbursa Trust	75,958,468	8.30%	8.30%
Public Float	118,055,932	12.90%	12.90%
TOTAL	**915,162,262**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**915,192,262**	93.63%	**100.00%**
Shares in company's treasury	62,285,243	6.37%	0.00%
TOTAL SHARES	**977,477,505**	**100.00%**	**100.00%**
Angel Losada Moreno	122,635,763	13.40%	13.40%
Ma Teresa Losada Moreno	122,635,763	13.40%	13.40%
Rosa Ma Losada Moreno	122,635,763	13.40%	13.40%
Angel Losada Gomez	110,738,264	12.10%	12.10%
Braulio Antonio Arsuaga Losada	41,183,652	4.50%	4.50%
Ma Pilar Arsuaga Losada	41,183,652	4.50%	4.50%
Ana Ma Arsuaga Losada	41,183,652	4.50%	4.50%
Family LOSADA	**602,196,508**	**65.80%**	**65.80%**
Lomoinvest, S.A. de C.V.	28,370,960	3.10%	3.10%
BANCO NACIONAL DE MEXICO	144,600,377	15.80%	15.80%
Inbursa Trust	75,960,958	8.30%	8.30%
Public Float	64,063,458	7.00%	7.00%
TOTAL	**915,192,262**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series "Unique" Shares *(no par value)*	**915,931,948**	93.67%	**100.00%**
Shares in company's treasury	61,900,400	6.33%	0.00%
TOTAL SHARES	**977,832,348**	**100.00%**	**100.00%**
Family LOSADA	641,827,557	70.07%	70.07%
Controempresas	30,178,350	3.29%	3.29%
Total (DIR&IND) Ownership F. LOSADA	**672,005,907**	**73.37%**	**73.37%**
BANCO NACIONAL DE MEXICO	122,490,889	13.37%	13.37%
Inbursa Trust	81,012,637	8.84%	8.84%
Public Float	40,422,515	4.41%	4.41%
TOTAL	**915,931,948**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

GRUPO INDUSTRIAL SALTILLO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**304,211,640**	99.52%	**100.00%**
Shares in company's treasury	1,477,693	0.48%	0.00%
TOTAL SHARES	**305,689,333**	**100.00%**	**100.00%**
Control and transferring-share Trust	165,976,332	54.56%	54.56%
Family López del Bosque	66,259,404	21.78%	21.78%
Public Float	71,975,904	23.66%	23.66%
TOTAL	**304,211,640**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**304,084,840**	99.48%	**100.00%**
Shares in company's treasury	1,604,493	0.52%	0.00%
TOTAL SHARES	**305,689,333**	**100.00%**	**100.00%**
Control and transferring-share Trust	165,072,240	54.28%	54.28%
Family López del Bosque	66,073,701	21.73%	21.73%
Public Float	72,938,899	23.99%	23.99%
TOTAL	**304,084,840**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**286,123,805**	99.60%	**100.00%**
Shares in company's treasury	1,153,155	0.40%	0.00%
TOTAL SHARES	**287,276,960**	**100.00%**	**100.00%**
Control and transferring-share Trust	163,748,400	57.23%	57.23%
Family López del Bosque	66,073,701	23.09%	23.09%
Public Float	56,301,704	19.68%	19.68%
TOTAL	**286,123,805**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

GRUPO INDUSTRIAL SALTILLO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**286,068,405**	99.58%	**100.00%**
Shares in company's treasury	1,208,555	0.42%	0.00%
TOTAL SHARES	**287,276,960**	**100.00%**	**100.00%**
Control and transferring-share Trust	163,748,400	57.24%	57.24%
Family López del Bosque	66,073,701	23.10%	23.10%
Public Float	56,246,304	19.66%	19.66%
TOTAL	**286,068,405**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**283,547,705**	98.70%	**100.00%**
Shares in company's treasury	3,729,255	1.30%	0.00%
TOTAL SHARES	**287,276,960**	**100.00%**	**100.00%**
Control and transferring-share Trust	163,748,400	57.75%	57.75%
Family López del Bosque	66,073,701	23.30%	23.30%
Public Float	53,725,604	18.95%	18.95%
TOTAL	**283,547,705**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Unique Series Shares *(no par value)*	**282,585,920**	98.37%	**100.00%**
Shares in company's treasury	4,691,040	1.63%	0.00%
TOTAL SHARES	**287,276,960**	**100.00%**	**100.00%**
Control and transferring-share Trust	163,748,400	57.95%	57.95%
Family López del Bosque	71,452,060	25.29%	25.29%
Public Float	47,385,460	16.77%	16.77%
TOTAL	**282,585,920**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

GRUPO MEXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**2,572,607,000**	99.14%	**100.00%**
Shares in company's treasury	22,393,000	0.86%	0.00%
TOTAL SHARES	**2,595,000,000**	**100.00%**	**100.00%**
Empresarios Industriales de México, S.A. C.V.	866,500,000	33.68%	33.68%
Germán Larrea Mota Velasco	330,072,082	12.83%	12.83%
SSB OM02 Omnibus	112,581,381	4.38%	4.38%
Safekeeping Account (Morgan ST)	74,630,791	2.90%	2.90%
Customers of Goldman Sach & Co.	72,114,045	2.80%	2.80%
Beatriz Alemán de Girón	59,044,377	2.30%	2.30%
GSI Segregate Account	36,394,258	1.41%	1.41%
JPM Chase Bank tready A/C	33,302,574	1.29%	1.29%
Clearing Account (Morgan ST)	27,458,550	1.07%	1.07%
Public Float	**960,508,942**	37.34%	37.34%
TOTAL	**2,572,607,000**	**100.00%**	**100.00%**
Data AR-06	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**2,594,352,485**	99.98%	**100.00%**
Shares in company's treasury	647,515	0.02%	0.00%
TOTAL SHARES	**2,595,000,000**	**100.00%**	**100.00%**
Empresarios Industriales de México, S.A. C.V.	855,250,000	32.97%	32.97%
Germán Larrea Mota Velasco	193,645,585	7.46%	7.46%
Banamex División Fiduciaria	191,247,623	7.37%	7.37%
Customers of Goldman Sach & Co.	78,552,465	3.03%	3.03%
Bearn Stearns & Co. Inc.	54,630,391	2.11%	2.11%
RMC Dexia IST-Client	41,305,508	1.59%	1.59%
Safekeeping Account (Morgan ST)	39,798,632	1.53%	1.53%
JPM Chase Bank tready A/C	33,694,255	1.30%	1.30%
GSI Segregate Account	31,727,858	1.22%	1.22%
Public Float	**1,074,500,168**	41.42%	41.42%
TOTAL	**2,594,352,485**	**100.00%**	**100.00%**
Data AR-05	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**865,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**865,000,000**	**100.00%**	**100.00%**
Empresarios Industriales de México, S.A. C.V.	285,000,000	32.95%	32.95%
Banamex División Fiduciaria	94,062,952	10.87%	10.87%
Germán Larrea Mota Velasco	44,192,651	5.11%	5.11%
Miguel Alemán Velasco	25,885,459	2.99%	2.99%
Bearn Stearns & Co. Inc.	21,417,336	2.48%	2.48%
Customers of Goldman Sach & Co.	17,253,104	1.99%	1.99%
Morgan Stanley Intl. Lond Safekeeping	13,102,261	1.51%	1.51%
Sylvia Mireles de Salazar	10,689,859	1.24%	1.24%
Royal Trust Corp. Of Canada- Client Ac.	10,384,293	1.20%	1.20%
Public Float	**343,012,085**	39.65%	39.65%
TOTAL	**865,000,000**	**100.00%**	**100.00%**
Data AR-04	***31/12/2004***		

GRUPO MEXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**865,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**865,000,000**	**100.00%**	**100.00%**
Empresarios Industriales de México, S.A. C.V.	284,839,693	32.93%	32.93%
Banamex División Fiduciaria	91,834,268	10.62%	10.62%
Miguel Alemán Velasco	33,817,467	3.91%	3.91%
Beatriz Alemán de Girón	15,838,903	1.83%	1.83%
Jorge Alemán Velasco	15,667,002	1.81%	1.81%
Fondo Inbursa F/008 Telmex Pensiones	13,860,101	1.60%	1.60%
Sylvia Mireles de Salazar	8,686,859	1.00%	1.00%
Royal Trust Corp. Of Canada- Client Ac.	7,370,468	0.85%	0.85%
Citygroup Global Markets Inc.	6,981,805	0.81%	0.81%
Public Float	**386,103,434**	44.64%	44.64%
TOTAL	**865,000,000**	**100.00%**	**100.00%**
Data AR-03	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**651,646,640**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**651,646,640**	**100.00%**	**100.00%**
Empresarios Industriales de México, S.A. C.V.	237,634,100	36.47%	36.47%
Banamex División Fiduciaria	148,018,771	22.71%	22.71%
Miguel Alemán Velasco	18,634,625	2.86%	2.86%
Grupo Joave, S.A. de C.V.	15,207,092	2.33%	2.33%
Grupo Miave, S.A. de C.V.	15,182,842	2.33%	2.33%
Grupo Bav, S.A. de C.V.	15,092,093	2.32%	2.32%
Banco Inbursa Fideicomiso 008	14,358,300	2.20%	2.20%
Dresdner Bank A.G.	10,722,100	1.65%	1.65%
Banco Inbursa Institución de Banca	10,581,004	1.62%	1.62%
Public Float	**166,215,713**	25.51%	25.51%
TOTAL	**651,646,640**	**100.00%**	**100.00%**
Data AR-02	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**651,646,640**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**651,646,640**	**100.00%**	**100.00%**
Empresarios Industriales de México, S.A. C.V.	236,285,870	36.26%	36.26%
Banamex División Fiduciaria	110,357,540	16.94%	16.94%
Miguel Alemán Velasco	18,634,625	2.86%	2.86%
Dresdner Bank A.G.	17,630,200	2.71%	2.71%
Grupo Miave, S.A. de C.V.	15,182,842	2.33%	2.33%
Grupo Joave, S.A. de C.V.	15,092,093	2.32%	2.32%
Grupo Bav, S.A. de C.V.	15,092,093	2.32%	2.32%
Banco Inbursa Fideicomiso 008	13,788,900	2.12%	2.12%
Máximo Salazar Nava	9,053,290	1.39%	1.39%
Public Float	**200,529,187**	30.77%	30.77%
TOTAL	**651,646,640**	**100.00%**	**100.00%**
Data AR-01	***31/12/2001***		

GRUPO MODELO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A, Class I *(no par value)*	1,459,389,728	44.88%	**56.10%**
Series B, Class II *(no par value)*	1,142,017,984	35.12%	**43.90%**
Series C, Class II *(no par value)*	650,351,920	20.00%	**0.00%**
TOTAL SHARES	**3,251,759,632**	100.00%	**100.00%**

Family Fernandez Rodriguez	Series A	1,459,389,728		
	Series B	0	44.88%	**56.10%**
	Series C	0		
Anheuser-Busch Companies Inc.	Series A	0		
	Series B	1,142,017,984	35.12%	**43.90%**
	Series C	0		
Shares Public Float	Series A	0		
	Series B	0	20.00%	**0.00%**
	Series C	650,351,920		
TOTAL	***Series A***	***1,459,389,728***		
	Series B	***1,142,017,984***	***100.000%***	***100.000%***
	Series C	***650,351,920***		

***** Data F20-06*** ***31/12/2006***

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A, Class I *(no par value)*	1,459,389,728	44.88%	**56.10%**
Series B, Class II *(no par value)*	1,142,017,984	35.12%	**43.90%**
Series C, Class II *(no par value)*	650,351,920	20.00%	**0.00%**
TOTAL SHARES	**3,251,759,632**	100.00%	**100.00%**

Family Fernandez Rodriguez	Series A	1,459,389,728		
	Series B	0	44.88%	**56.10%**
	Series C	0		
Anheuser-Busch Companies Inc.	Series A	0		
	Series B	1,142,017,984	35.12%	**43.90%**
	Series C	0		
Shares Public Float	Series A	0		
	Series B	0	20.00%	**0.00%**
	Series C	650,351,920		
TOTAL	***Series A***	***1,459,389,728***		
	Series B	***1,142,017,984***	***100.000%***	***100.000%***
	Series C	***650,351,920***		

***** Data F20-05*** ***31/12/2005***

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A, Class I *(no par value)*	1,459,389,728	44.88%	**56.10%**
Series B, Class II *(no par value)*	1,142,017,984	35.12%	**43.90%**
Series C, Class II *(no par value)*	650,351,920	20.00%	**0.00%**
TOTAL SHARES	**3,251,759,632**	100.00%	**100.00%**

Family Fernandez Rodriguez	Series A	1,459,389,728		
	Series B	0	44.88%	**56.10%**
	Series C	0		
Anheuser-Busch Companies Inc.	Series A	0		
	Series B	1,142,017,984	35.12%	**43.90%**
	Series C	0		
Shares Public Float	Series A	0		
	Series B	0	20.00%	**0.00%**
	Series C	650,351,920		
TOTAL	***Series A***	***1,459,389,728***		
	Series B	***1,142,017,984***	***100.000%***	***100.000%***
	Series C	***650,351,920***		

***** Data F20-04*** ***31/12/2004***

GRUPO MODELO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A, Class I *(no par value)*	1,459,389,728	44.88%	**56.10%**
Series B, Class II *(no par value)*	1,142,017,984	35.12%	**43.90%**
Series C, Class II *(no par value)*	650,351,920	20.00%	**0.00%**
TOTAL SHARES	**3,251,759,632**	100.00%	**100.00%**

Family Fernandez Rodriguez	Series A	1,459,389,728		
	Series B	0	44.88%	**56.10%**
	Series C	0		
Anheuser-Busch Companies Inc.	Series A	0		
	Series B	1,142,017,984	35.12%	**43.90%**
	Series C	0		
Shares Public Float	Series A	0		
	Series B	0	20.00%	**0.00%**
	Series C	650,351,920		
TOTAL	***Series A***	***1,459,389,728***		
	Series B	***1,142,017,984***	***100.000%***	***100.000%***
	Series C	***650,351,920***		

***** Data F20-03*** ***31/12/2003***

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A, Class I *(no par value)*	1,459,389,728	44.88%	**56.10%**
Series B, Class II *(no par value)*	1,142,017,984	35.12%	**43.90%**
Series C, Class II *(no par value)*	650,351,920	20.00%	**0.00%**
TOTAL SHARES	**3,251,759,632**	100.00%	**100.00%**

Family Fernandez Rodriguez	Series A	1,459,389,728		
	Series B	0	44.88%	**56.10%**
	Series C	0		
Anheuser-Busch Companies Inc.	Series A	0		
	Series B	1,142,017,984	35.12%	**43.90%**
	Series C	0		
Shares Public Float	Series A	0		
	Series B	0	20.00%	**0.00%**
	Series C	650,351,920		
TOTAL	***Series A***	***1,459,389,728***		
	Series B	***1,142,017,984***	***100.000%***	***100.000%***
	Series C	***650,351,920***		

***** Data F20-02*** ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A, Class I *(no par value)*	1,459,389,725	44.88%	**56.10%**
Series B, Class II *(no par value)*	1,142,017,984	35.12%	**43.90%**
Series C, Class II *(no par value)*	650,351,920	20.00%	**0.00%**
TOTAL SHARES	**3,251,759,629**	100.00%	**100.00%**

Family Fernandez Rodriguez	Series A	1,459,389,728		
	Series B	0	44.88%	**56.10%**
	Series C	0		
Anheuser-Busch Companies Inc.	Series A	0		
	Series B	1,142,017,984	35.12%	**43.90%**
	Series C	0		
Shares Public Float	Series A	-3		
	Series B	0	20.00%	**0.00%**
	Series C	650,351,920		
TOTAL	***Series A***	***1,459,389,725***		
	Series B	***1,142,017,984***	***100.000%***	***100.000%***
	Series C	***650,351,920***		

***** Data F20-01*** ***31/12/2001***

GRUMA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**482,549,952**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**482,549,952**	**100.00%**	**100.00%**
Family González Barrera	**220,822,677**	45.76%	**60.54%**
Archer-Daniels-Midland	**130,901,630**	27.13%	**26.24%**
Directors & Officers as a group	**169,255**	0.04%	**0.04%**
ADRs	**77,235,272**	16.01%	**0.00%**
Public Float	**53,421,118**	11.07%	**13.18%**
TOTAL	**482,549,952**	**100.00%**	**100.00%**
Data 20-F/A 06	***31/12/2006***		

Of the shares beneficially owned by Archer-Daniels-Midland, ***24,566,561*** *shares are held through a Mexican corporation jointly owned and controlled by Mr. González Barrera, who has sole authority to determine how these shares are voted.*

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**452,549,952**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**452,549,952**	**100.00%**	**100.00%**
Family González Barrera	**226,737,790**	50.10%	**66.96%**
Archer-Daniels-Midland	**130,901,630**	28.93%	**28.33%**
Directors & Officers as a group	**191,811**	0.04%	**0.05%**
ADRs	**77,235,272**	17.07%	**0.00%**
Public Float	**17,483,449**	3.86%	**4.66%**
TOTAL	**452,549,952**	**100.00%**	**100.00%**
Data 20-F 05	***31/12/2005***		

Of the shares beneficially owned by Archer-Daniels-Midland, ***24,566,561*** *shares are held through a Mexican corporation jointly owned and controlled by Mr. González Barrera, who has sole authority to determine how these shares are voted.*

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**452,049,643**	99.89%	**100.00%**
Shares in company's treasury	500,309	0.11%	0.00%
TOTAL SHARES	**452,549,952**	**100.00%**	**100.00%**
Family González Barrera	**211,517,757**	46.79%	**62.99%**
Archer-Daniels-Midland	**130,901,630**	28.96%	**28.37%**
Directors & Officers as a group	**6,021,289**	1.33%	**1.61%**
ADRs	**77,235,272**	17.09%	**0.00%**
Public Float	**26,373,695**	5.83%	**7.04%**
TOTAL	**452,049,643**	**100.00%**	**100.00%**
Data 20-F 04	***31/12/2004***		

Of the shares beneficially owned by Archer-Daniels-Midland, ***24,566,561*** *shares are held through a Mexican corporation jointly owned and controlled by Mr. González Barrera, who has sole authority to determine how these shares are voted.*

GRUMA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**450,133,443**	99.47%	**100.00%**
Shares in company's treasury	2,416,509	0.53%	0.00%
TOTAL SHARES	**452,549,952**	**100.00%**	**100.00%**
Family González Barrera	**212,401,460**	47.19%	**62.76%**
Archer-Daniels-Midland	**130,901,630**	29.08%	**28.16%**
Directors & Officers as a group	**6,842,308**	1.52%	**1.81%**
ADRs	**72,549,884**	16.12%	**0.00%**
Public Float	**27,438,161**	6.10%	**7.27%**
TOTAL	**450,133,443**	**100.00%**	**100.00%**
Data 20-F-03	***31/12/2003***		

Of the shares beneficially owned by Archer-Daniels-Midland, ***24,566,561*** *shares are held through a Mexican corporation jointly owned and controlled by Mr. González Barrera, who has sole authority to determine how these shares are voted.*

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**441,402,386**	97.54%	**100.00%**
Shares in company's treasury	11,147,566	2.46%	0.00%
TOTAL SHARES	**452,549,952**	**100.00%**	**100.00%**
Family González Barrera	**211,532,757**	47.92%	**64.02%**
Archer-Daniels-Midland	**130,901,630**	29.66%	**28.83%**
Directors & Officers as a group	**11,958,006**	2.71%	**3.24%**
ADRs	**72,613,236**	16.45%	**0.00%**
Public Float	**14,396,757**	3.26%	**3.90%**
TOTAL	**441,402,386**	**100.00%**	**100.00%**
Data 20-F-02	***31/12/2002***		

Of the shares beneficially owned by Archer-Daniels-Midland, ***24,566,561*** *shares are held through a Mexican corporation jointly owned and controlled by Mr. González Barrera, who has sole authority to determine how these shares are voted.*

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**441,725,086**	97.61%	**100.00%**
Shares in company's treasury	10,824,866	2.39%	0.00%
TOTAL SHARES	**452,549,952**	**100.00%**	**100.00%**
Family González Barrera	**211,532,757**	47.89%	**63.98%**
Archer-Daniels-Midland	**130,901,630**	29.63%	**28.82%**
Directors & Officers as a group	**8,913,365**	2.02%	**2.42%**
ADRs	**72,719,336**	16.46%	**0.00%**
Public Float	**17,657,998**	4.00%	**4.79%**
TOTAL	**441,725,086**	**100.00%**	**100.00%**
Data AR-01	***31/12/2001***		

Of the shares beneficially owned by Archer-Daniels-Midland, ***24,566,561*** *shares are held through a Mexican corporation jointly owned and controlled by Mr. González Barrera, who has sole authority to determine how these shares are voted.*

EMPRESAS ICA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**405,177,479**	97.57%	**100.00%**
Shares in company's treasury	10,095,366	2.43%	0.00%
TOTAL SHARES	**415,272,845**	**100.00%**	**100.00%**
Family Quintana	**31,993,173**	7.90%	**73.62%**
Management Trust	**12,508,238**	3.09%	**0.00%**
Employee Trust	**143**	0.00%	**0.00%**
Fundacion Trust	**8,585,022**	2.12%	**0.00%**
CPOs	**232,677,882**	57.43%	**0.00%**
ADRs	**17,017,454**	4.20%	**0.00%**
Public Float	**102,395,567**	25.27%	**26.38%**
TOTAL	**405,177,479**	**100.00%**	**100.00%**
Data 20-F/A 06	***31/12/2006***		

None of our directors or executive officers (other than Mr. Quintana) is the beneficial owner of more than 1% of any class of capital stock, other than through the management trust.

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**404,245,330**	97.34%	**100.00%**
Shares in company's treasury	11,027,515	2.66%	0.00%
TOTAL SHARES	**415,272,845**	**100.00%**	**100.00%**
Family Quintana	**31,993,173**	7.91%	**83.25%**
Management Trust	**11,243,235**	2.78%	**0.00%**
Employee Trust	**300,443**	0.07%	**0.00%**
Fundacion Trust	**8,585,022**	2.12%	**0.00%**
CPOs	**258,484,984**	63.94%	**0.00%**
ADRs	**31,126,890**	7.70%	**0.00%**
Public Float	**62,511,583**	15.46%	**16.75%**
TOTAL	**404,245,330**	**100.00%**	**100.00%**
Data 20-F 05	***31/12/2005***		

None of our directors or executive officers (other than Mr. Quintana) is the beneficial owner of more than 1% of any class of capital stock, other than through the management trust.

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**1,865,054,114**	95.75%	**100.00%**
Shares in company's treasury	82,848,239	4.25%	0.00%
TOTAL SHARES	**1,947,902,353**	**100.00%**	**100.00%**
Family Quintana	**166,465,200**	8.93%	**59.03%**
Management Trust	**65,936,086**	3.54%	**0.00%**
Employee Trust	**1,802,658**	0.10%	**0.00%**
Fundacion Trust	**51,760,136**	2.78%	**0.00%**
CPOs	**718,105,216**	38.50%	**0.00%**
ADRs	**164,124,762**	8.80%	**0.00%**
Public Float	**696,860,056**	37.36%	**40.97%**
TOTAL	**1,865,054,114**	**100.00%**	**100.00%**
Data 20-F 04	***31/12/2004***		

None of our directors or executive officers (other than Mr. Quintana) is the beneficial owner of more than 1% of any class of capital stock, other than through the management trust.

EMPRESAS ICA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**1,682,389,166**	86.37%	**100.00%**
Shares in company's treasury	265,513,187	13.63%	0.00%
TOTAL SHARES	**1,947,902,353**	**100.00%**	**100.00%**
Grupo Inbursa	**260,170,768**	15.46%	**16.62%**
Family Quintana	**162,390,200**	9.65%	**41.84%**
Management Trust	**88,548,214**	5.26%	**0.00%**
Employee Trust	**2,398,158**	0.14%	**0.00%**
Fundacion Trust	**51,760,136**	3.08%	**0.00%**
CPOs	**349,936,947**	20.80%	**0.00%**
ADRs	**116,757,808**	6.94%	**0.00%**
Public Float	**650,426,935**	38.66%	**41.54%**
TOTAL	**1,682,389,166**	**100.00%**	**100.00%**
Data 20-F-03	***31/12/2003***		

None of our directors or executive officers (other than Mr. Quintana) is the beneficial owner of more than 1% of any class of capital stock, other than through the management trust.

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**621,561,433**	89.65%	**100.00%**
Shares in company's treasury	71,736,606	10.35%	0.00%
TOTAL SHARES	**693,298,039**	**100.00%**	**100.00%**
Family Quintana	**88,647,200**	14.26%	**76.19%**
Management Trust	**99,244,011**	15.97%	**0.00%**
Employee Trust	**2,867,158**	0.46%	**0.00%**
Fundacion Trust	**51,760,136**	8.33%	**0.00%**
CPOs	**131,149,462**	21.10%	**0.00%**
ADRs	**131,149,462**	21.10%	**0.00%**
Public Float	**116,744,003**	18.78%	**23.81%**
TOTAL	**621,561,433**	**100.00%**	**100.00%**
Data 20-F-02	***31/12/2002***		

None of our directors or executive officers (other than Mr. Quintana) is the beneficial owner of more than 1% of any class of capital stock, other than through the management trust.

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique *(no par value)*	**621,561,433**	89.65%	**100.00%**
Shares in company's treasury	71,736,606	10.35%	0.00%
TOTAL SHARES	**693,298,039**	**100.00%**	**100.00%**
Family Quintana	**88,646,600**	14.26%	**44.88%**
Management Trust	**0**	0.00%	**0.00%**
Employee Trust	**0**	0.00%	**0.00%**
Fundacion Trust	**0**	0.00%	**0.00%**
CPOs	**131,149,462**	21.10%	**0.00%**
ADRs	**131,771,024**	21.20%	**0.00%**
Public Float	**269,994,347**	43.44%	**55.12%**
TOTAL	**621,561,433**	**100.00%**	**100.00%**
Data AR-01	***31/12/2001***		

None of our directors or executive officers (other than Mr. Quintana) is the beneficial owner of more than 1% of any class of capital stock, other than through the management trust.

ICH, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**436,574,580**	100.00%	**100.00%**
TOTAL SHARES	**436,574,580**	100.00%	**100.00%**
Family Virgil González	**172,446,959**	39.50%	**39.50%**
OPERADORA DE MANUFACTURERA DE TUBOS, SA DE CV	96,046,408	22.00%	**22.00%**
COMPAÑIA MEXICANA DE TUBOS, SA DE CV	13,533,812	3.10%	**3.10%**
Public Float	154,547,401	35.40%	**35.40%**
TOTAL	**436,574,580**	100.00%	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**436,574,580**	100.00%	**100.00%**
TOTAL SHARES	**436,574,580**	100.00%	**100.00%**
Family Virgil González	**172,883,534**	39.60%	**39.60%**
OPERADORA DE MANUFACTURERA DE TUBOS, SA DE CV	96,046,408	22.00%	**22.00%**
COMPAÑIA MEXICANA DE TUBOS, SA DE CV	13,533,812	3.10%	**3.10%**
Public Float	154,110,827	35.30%	**35.30%**
TOTAL	**436,574,580**	100.00%	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**120,169,248**	100.00%	**100.00%**
TOTAL SHARES	**120,169,248**	100.00%	**100.00%**
Family Virgil González	**54,677,008**	45.50%	**45.50%**
OPERADORA DE MANUFACTURERA DE TUBOS, SA DE CV	30,402,820	25.30%	**25.30%**
COMPAÑIA MEXICANA DE TUBOS, SA DE CV	4,566,431	3.80%	**3.80%**
Public Float	30,522,989	25.40%	**25.40%**
TOTAL	**120,169,248**	100.00%	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

ICH, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**120,169,248**	100.00%	**100.00%**
TOTAL SHARES	**120,169,248**	100.00%	**100.00%**
Family Virgil González	**92,782,440**	77.21%	**77.21%**
BANCO NACIONAL DE MEXICO	16,102,679	13.40%	**13.40%**
INVERSORA BURSATIL	5,167,278	4.30%	**4.30%**
Public Float	6,116,851	5.09%	**5.09%**
TOTAL	**120,169,248**	100.00%	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**82,675,545**	100.00%	**100.00%**
TOTAL SHARES	**82,675,545**	100.00%	**100.00%**
Family Virgil González	**56,586,650**	68.44%	**68.44%**
BANCO NACIONAL DE MEXICO	15,708,354	19.00%	**19.00%**
INVERSORA BURSATIL	3,307,022	4.00%	**4.00%**
Public Float	7,073,520	8.56%	**8.56%**
TOTAL	**82,675,545**	100.00%	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B *(no par value)*	**82,675,545**	100.00%	**100.00%**
TOTAL SHARES	**82,675,545**	100.00%	**100.00%**
Family Virgil González	**56,918,537**	68.85%	**68.85%**
USB PAINE WEBBER INC	9,921,065	12.00%	**12.00%**
CIBC WORLD MARKETS CORP.	4,960,533	6.00%	**6.00%**
Public Float	10,875,410	13.15%	**13.15%**
TOTAL	**82,675,545**	100.00%	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

KIMBERLY-CLARK DE MEXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**592,927,075**	52.02%	**52.02%**
Series B Shares (no par value)	**546,917,440**	47.98%	**47.98%**
TOTAL SHARES	**1,139,844,515**	100.00%	**100.00%**
Kimberly-Clark Corporation	**545,985,523**	47.90%	**50.26%**
CPOs "A" (NAFINSA Trust)	**377,288,534**	33.10%	**0.00%**
ADRs	**53,572,692**	4.70%	**0.00%**
Public Float	**162,997,766**	14.30%	**49.74%**
TOTAL	**1,139,844,515**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**601,960,175**	52.03%	**52.03%**
Series B Shares (no par value)	**555,044,040**	47.97%	**47.97%**
TOTAL SHARES	**1,157,004,215**	100.00%	**100.00%**
Kimberly-Clark Holland BV	**554,205,019**	47.90%	**50.58%**
CPOs "A" (NAFINSA Trust)	**443,132,614**	38.30%	**0.00%**
ADRs	**61,321,223**	5.30%	**0.00%**
Public Float	**98,345,358**	8.50%	**49.42%**
TOTAL	**1,157,004,215**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**608,394,275**	52.02%	**52.02%**
Series B Shares (no par value)	**561,189,040**	47.98%	**47.98%**
TOTAL SHARES	**1,169,583,315**	100.00%	**100.00%**
Kimberly-Clark Holland BV	**560,230,408**	47.90%	**50.58%**
CPOs "A" (NAFINSA Trust)	**378,944,994**	32.40%	**0.00%**
ADRs	**61,987,916**	5.30%	**0.00%**
Public Float	**168,419,997**	14.40%	**49.42%**
TOTAL	**1,169,583,315**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

KIMBERLY-CLARK DE MEXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**617,688,575**	52.03%	**52.03%**
Series B Shares (no par value)	**569,533,840**	47.97%	**47.97%**
TOTAL SHARES	**1,187,222,415**	100.00%	**100.00%**
Kimberly-Clark Holland BV	**568,679,537**	47.90%	**50.21%**
CPOs "A" (NAFINSA Trust)	**445,208,406**	37.50%	**0.00%**
ADRs	**54,612,231**	4.60%	**0.00%**
Public Float	**118,722,242**	10.00%	**49.79%**
TOTAL	**1,187,222,415**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**626,329,875**	52.02%	**52.02%**
Series B Shares (no par value)	**577,686,940**	47.98%	**47.98%**
TOTAL SHARES	**1,204,016,815**	100.00%	**100.00%**
Kimberly-Clark Holland BV	**576,724,054**	47.90%	**49.64%**
CPOs "A" (NAFINSA Trust)	**421,405,885**	35.00%	**0.00%**
ADRs	**42,140,589**	3.50%	**0.00%**
Public Float	**163,746,287**	13.60%	**50.36%**
TOTAL	**1,204,016,815**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**640,470,475**	52.02%	**52.02%**
Series B Shares (no par value)	**590,716,610**	47.98%	**47.98%**
TOTAL SHARES	**1,231,187,085**	100.00%	**100.00%**
Kimberly-Clark Holland BV	**589,738,614**	47.90%	**49.64%**
CPOs "A" (NAFINSA Trust)	**430,915,480**	35.00%	**0.00%**
ADRs	**43,091,548**	3.50%	**0.00%**
Public Float	**167,441,444**	13.60%	**50.36%**
TOTAL	**1,231,187,085**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

COCA-COLA FEMSA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares		no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*		992,078,519	53.73%	**62.96%**
Series D Shares *(no par value)*		583,545,678	31.60%	**37.04%**
Series L Shares *(no par value)*		270,906,004	14.67%	**0.00%**
TOTAL SHARES		**1,846,530,201**	100.00%	**100.00%**
CIBSA*	Series A	992,078,519		
	Series D	0	53.73%	**62.96%**
	Series L	0		
****Coca-Cola Company's subsidiaries***	Series A	0		
	Series D	583,545,678	31.60%	**37.04%**
	Series L	0		
ADRs	Series A	0		
	Series D	0	12.44%	**0.00%**
	Series L	229,723,700		
Shares Public Float	Series A	0		
	Series D	0	2.23%	**0.00%**
	Series L	41,182,304		
TOTAL	**Series A**	***992,078,519***		
	Series D	***583,545,678***	***100.000%***	***100.000%***
	Series L	***270,906,004***		

Data AR-06 ***31/12/2006***

**FEMSA is the owner of 100% of CIBSA's (Compañía Internacional de Bebidas, S.A. de C.V.) shares.*

***The Coca-Cola company indirectly owns these shares through its subsidiaries The Inmex Corporation, Dulux CBAI 2003, B.V. And Dulux CBEXINMX 2003, B.V.*

Each ADS represents 10 Series L shares.

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares		no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*		844,078,519	45.71%	**53.57%**
Series D Shares *(no par value)*		731,545,678	39.62%	**46.43%**
Series L Shares *(no par value)*		270,906,004	14.67%	**0.00%**
TOTAL SHARES		**1,846,530,201**	100.00%	**100.00%**
CIBSA*	Series A	844,078,519		
	Series D	0	45.71%	**53.57%**
	Series L	0		
****Coca-Cola Company's subsidiaries***	Series A	0		
	Series D	731,545,678	39.62%	**46.43%**
	Series L	0		
ADRs	Series A	0		
	Series D	0	12.78%	**0.00%**
	Series L	236,014,180		
Shares Public Float	Series A	0		
	Series D	0	1.89%	**0.00%**
	Series L	34,891,824		
TOTAL	**Series A**	***844,078,519***		
	Series D	***731,545,678***	***100.000%***	***100.000%***
	Series L	***270,906,004***		

Data AR-05 ***31/12/2005***

**FEMSA is the owner of 100% of CIBSA's (Compañía Internacional de Bebidas, S.A. de C.V.) shares.*

***The Coca-Cola company indirectly owns these shares through its subsidiaries The Inmex Corporation, Dulux CBAI 2003, B.V. And Dulux CBEXINMX 2003, B.V.*

Each ADS represents 10 Series L shares.

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares		no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*		844,078,519	45.71%	**53.57%**
Series D Shares *(no par value)*		731,545,678	39.62%	**46.43%**
Series L Shares *(no par value)*		270,906,004	14.67%	**0.00%**
TOTAL SHARES		**1,846,530,201**	100.00%	**100.00%**
CIBSA*	Series A	844,078,519		
	Series D	0	45.71%	**53.57%**
	Series L	0		
****Coca-Cola Company's subsidiaries***	Series A	0		
	Series D	731,545,678	39.62%	**46.43%**
	Series L	0		
ADRs	Series A	0		
	Series D	0	12.71%	**0.00%**
	Series L	234,775,710		
Shares Public Float	Series A	0		
	Series D	0	1.96%	**0.00%**
	Series L	36,130,294		
TOTAL	**Series A**	***844,078,519***		
	Series D	***731,545,678***	***100.000%***	***100.000%***
	Series L	***270,906,004***		

Data AR-04 ***31/12/2004***

**FEMSA is the owner of 100% of CIBSA's (Compañía Internacional de Bebidas, S.A. de C.V.) shares.*

***The Coca-Cola company indirectly owns these shares through its subsidiaries The Inmex Corporation, Dulux CBAI 2003, B.V. And Dulux CBEXINMX 2003, B.V.*

Each ADS represents 10 Series L shares.

COCA-COLA FEMSA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	844,078,519	45.71%	**53.57%**
Series D Shares *(no par value)*	731,545,678	39.62%	**46.43%**
Series L Shares *(no par value)*	270,906,004	14.67%	**0.00%**
TOTAL SHARES	**1,846,530,201**	100.00%	**100.00%**

CIBSA*	Series A	844,078,519	45.71%	**53.57%**
	Series D	0		
	Series L	0		
****Coca-Cola Company's subsidiaries***	Series A	0	39.62%	**46.43%**
	Series D	731,545,678		
	Series L	0		
ADRs	Series A	0	13.50%	**0.00%**
	Series D	0		
	Series L	249,233,524		
Shares Public Float	Series A	0	1.17%	**0.00%**
	Series D	0		
	Series L	21,672,480		
TOTAL	**Series A**	***844,078,519***	***100.000%***	***100.000%***
	Series D	***731,545,678***		
	Series L	***270,906,004***		

Data AR-03 ***31/12/2003***

**FEMSA is the owner of 100% of CIBSA's (Compañía Internacional de Bebidas, S.A. de C.V.) shares.*

***The Coca-Cola company indirectly owns these shares through its subsidiaries The Inmex Corporation, Dulux CBAI 2003, B.V. And Dulux CBEXINMX 2003, B.V.*

Each ADS represents 10 Series L shares.

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	726,750,000	51.00%	**62.96%**
Series D Shares *(no par value)*	427,500,000	30.00%	**37.04%**
Series L Shares *(no par value)*	270,750,000	19.00%	**0.00%**
TOTAL SHARES	**1,425,000,000**	100.00%	**100.00%**

Grupo Industrial EMPREX, S.A. DE	Series A	726,750,000	51.00%	**62.96%**
	Series D	0		
	Series L	0		
*****Impulsora de Mercados, SA de CV***	Series A	0	30.00%	**37.04%**
	Series D	427,500,000		
	Series L	0		
ADRs	Series A	0	17.86%	**0.00%**
	Series D	0		
	Series L	254,505,000		
Shares Public Float	Series A	0	1.14%	**0.00%**
	Series D	0		
	Series L	16,245,000		
TOTAL	**Series A**	***726,750,000***	***100.000%***	***100.000%***
	Series D	***427,500,000***		
	Series L	***270,750,000***		

Data AR-02 ***31/12/2002***

**Grupo Industrial EMPREX, S.A. DE C.V is a subsidiary of FEMSA that owns 99.98% of EMPREX's shares.*

***Impulsora de Mercados, S.A. de C.V. Is a subsidiary owened by The Coca-Cola company.*

Each ADS represents 10 Series L shares.

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	726,750,000	51.00%	**62.96%**
Series D Shares *(no par value)*	427,500,000	30.00%	**37.04%**
Series L Shares *(no par value)*	270,750,000	19.00%	**0.00%**
TOTAL SHARES	**1,425,000,000**	100.00%	**100.00%**

Grupo Industrial EMPREX, S.A. DE	Series A	726,750,000	51.00%	**62.96%**
	Series D	0		
	Series L	0		
*****Impulsora de Mercados, SA de CV***	Series A	0	30.00%	**37.04%**
	Series D	427,500,000		
	Series L	0		
ADRs	Series A	0	17.90%	**0.00%**
	Series D	0		
	Series L	255,088,260		
Shares Public Float	Series A	0	1.10%	**0.00%**
	Series D	0		
	Series L	15,661,740		
TOTAL	**Series A**	***726,750,000***	***100.000%***	***100.000%***
	Series D	***427,500,000***		
	Series L	***270,750,000***		

Data AR-01 ***31/12/2001***

**Grupo Industrial EMPREX, S.A. DE C.V is a subsidiary of FEMSA that owns 99.98% of EMPREX's shares.*

***Impulsora de Mercados, S.A. de C.V. Is a subsidiary owened by The Coca-Cola company.*

Each ADS represents 10 Series L shares.

GRUPO LAMOSA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series Unique Shares (no par value)	**122,412,000**	100.00%	**100.00%**
TOTAL SHARES	**122,412,000**	100.00%	**100.00%**
**** INVERCER, S. A.***	**62,462,147**	51.03%	**51.03%**
Public Float	**59,949,853**	48.97%	**48.97%**
TOTAL	**122,412,000**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

**** INVERCER, S.A. and DESARROLLADORA CORPORATIVA, S.A. hold more than five percent of the total shares of the company each.***

Families holding more than **five** percent of the shares of LAMOSA are as follows,

Family Valdés Canale	21,299,688	17.40%	17.40%
Family Rubio Elusúa	18,729,036	15.30%	15.30%
Family Elusúa González	10,037,784	8.20%	8.20%
Family Toussaint Elusúa	9,548,136	7.80%	7.80%
Family Barragán Elusúa	9,548,136	7.80%	7.80%
Family Elusúa Roblez	9,425,724	7.70%	7.70%
	78,588,504	**64.20%**	

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares (no par value)	**121,200,000**	100.00%	**100.00%**
TOTAL SHARES	**121,200,000**	100.00%	**100.00%**
**** INVERCER, S. A.***	**61,843,710**	51.03%	**51.03%**
Public Float	**59,356,290**	48.97%	**48.97%**
TOTAL	**121,200,000**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

**** INVERCER, S.A. and DESARROLLADORA CORPORATIVA, S.A. hold more than five percent of the total shares of the company each.***

Families holding more than **five** percent of the shares of LAMOSA are as follows,

Family Valdés Canale	20,967,600	17.30%	17.30%
Family Rubio Elusúa	18,907,200	15.60%	15.60%
Family Elusúa González	9,817,200	8.10%	8.10%
Family Toussaint Elusúa	9,453,600	7.80%	7.80%
Family Barragán Elusúa	9,453,600	7.80%	7.80%
Family Elusúa Roblez	9,332,400	7.70%	7.70%
	77,931,600	**64.30%**	

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares (no par value)	**120,000,000**	100.00%	**100.00%**
TOTAL SHARES	**120,000,000**	100.00%	**100.00%**
**** INVERCER, S. A.***	**61,231,395**	51.03%	**51.03%**
Public Float	**58,768,605**	48.97%	**48.97%**
TOTAL	**120,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

**** INVERCER, S.A. and DESARROLLADORA CORPORATIVA, S.A. hold more than five percent of the total shares of the company each.***

Families holding more than **five** percent of the shares of LAMOSA are as follows,

Family Valdés Canale	20,400,000	17.00%	17.00%
Family Rubio Elusúa	18,840,000	15.70%	15.70%
Family Elusúa González	9,480,000	7.90%	7.90%
Family Toussaint Elusúa	9,360,000	7.80%	7.80%
Family Barragán Elusúa	9,360,000	7.80%	7.80%
Family Elusúa Roblez	9,240,000	7.70%	7.70%
	76,680,000	**63.90%**	

GRUPO LAMOSA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares (no par value)	**120,000,000**	100.00%	**100.00%**
TOTAL SHARES	**120,000,000**	100.00%	**100.00%**
**** INVERCER, S. A.***	**61,231,395**	51.03%	**51.03%**
Public Float	**58,768,605**	48.97%	**48.97%**
TOTAL	**120,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

**** INVERCER, S.A.; DESARROLLADORA CORPORATIVA, S.A. And BANAMEX, S.A. (through a third party) hold more than five percent of the total capital of the company each.***

Families holding more than **five** percent of the shares of LAMOSA and executives holding more than **one** percent of the company share are the followings,

Family Valdés Canale	20,880,000	17.40%	17.40%
Family Rubio Elusúa	18,960,000	15.80%	15.80%
Family Elusúa González	9,480,000	7.90%	7.90%
Family Toussaint Elusúa	9,360,000	7.80%	7.80%
Enrique Alvarez-Tostado Ascorve	**18,180**	0.02%	**0.02%**
Luis Eduardo Valdés Gámes	**13,000**	0.01%	**0.01%**
Moisés Benavides Gómez	**45**	0.00%	**0.00%**
Francisco Javier Hinojosa González	**5**	0.00%	**0.00%**
Enrique López Pérez	**115**	0.00%	**0.00%**
	58,711,345	**48.93%**	

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares (no par value)	**120,000,000**	100.00%	**100.00%**
TOTAL SHARES	**120,000,000**	100.00%	**100.00%**
**** INVERCER, S. A.***	**61,231,395**	51.03%	**51.03%**
Public Float	**58,768,605**	48.97%	**48.97%**
TOTAL	**120,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

**** INVERCER, S.A. and DESARROLLADORA CORPORATIVA, S.A. hold more than five percent of the total capital of the company each.***

Families that through INVERCER, S.A. hold more than **five** percent of the shares of LAMOSA and directors and executives holding more than **one** percent of the company share are as follows,

Family Rubio Elusúa	18,400,447	15.33%	15.33%
Family Valdés Canale	12,246,280	10.21%	10.21%
Family Elusúa González	9,055,299	7.55%	7.55%
Family Toussaint Elusúa	8,166,484	6.81%	6.81%
Bernardo Elosúa Robles	**1,618,071**	1.35%	**1.35%**
José Manuel Valverde Valdés	**2,395,227**	2.00%	**2.00%**
Enrique Alvarez-Tostado	**18,180**	0.02%	**0.02%**
Luis Eduardo Valdés Gámes	**13,000**	0.01%	**0.01%**
Moisés Benavides Gómez	**360,745**	0.30%	**0.30%**
	52,273,733	**43.56%**	

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series B Shares (no par value)	**120,000,000**	100.00%	**100.00%**
TOTAL SHARES	**120,000,000**	100.00%	**100.00%**
**** INVERCER, S. A.***	**61,231,395**	51.03%	**51.03%**
Public Float	**58,768,605**	48.97%	**48.97%**
TOTAL	**120,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

*** INVERCER, S.A. is a company controlled by the *Family Elosúa Muguerza*.**

The individual tenancy of the directors and the main executives of LAMOSA is the following,

Bernardo Elosúa Robles	**440,657**	0.37%	**0.37%**
Júan Miguel Rubio Elosúa	**249,655**	0.21%	**0.21%**
José Alfonso Rubio Elosúa	**369,055**	0.31%	**0.31%**
Federico Toussaint Elosúa	**80,200**	0.07%	**0.07%**
José Manuel Valverde Valdés	**19,840**	0.02%	**0.02%**
Enrique Alvarez-Tostado	**18,180**	0.02%	**0.02%**
Luis Eduardo Valdés Gámes	**13,000**	0.01%	**0.01%**
Moisés Benavides Gómez	**382,745**	0.32%	**0.32%**
	1,573,332	**1.31%**	

EL PUERTO DE LIVERPOOL, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series 1 Shares *(no par value)*	1,144,750,000	85.29%	**100.00%**
Series C-1 Shares *(no par value)*	197,446,100	14.71%	**0.00%**
TOTAL SHARES	**1,342,196,100**	**100.00%**	**100.00%**

Controlling Group	Series 1	80,863,159	7.32%	7.06%
	Series C-1	17,358,554		
Banco Invex, S.A. Trust 0327	Series 1	219,919,450	16.39%	19.21%
	Series C-1	0		
Banco Nacional de México, S.A.	Series 1	215,700,424	16.07%	18.84%
	Series C-1	0		
Banco Nacional de México, Trust 15228-3	Series 1	214,866,695	16.01%	18.77%
	Series C-1	0		
INTERSETTLE	Series 1	126,400,000	9.42%	11.04%
	Series C-1	0		
Banco Invex, S.A. Trust 0387	Series 1	101,119,450	7.53%	8.83%
	Series C-1	0		
BBVA Bancomer Servicios T 25078 7	Series 1	76,047,567	5.67%	6.64%
	Series C-1	0		
PICTET BANK & TRUST LIMITED	Series 1	59,617,452	4.44%	5.21%
	Series C-1	0		
Public Float	Series 1	50,215,803	17.16%	4.39%
	Series C-1	180,087,546		
TOTAL	***Series 1***	***1,144,750,000***	***100.00%***	***100.00%***
	Series C-1	***197,446,100***		

Data AR-06** ***31/12/2006

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series 1 Shares *(no par value)*	1,144,750,000	85.29%	**100.00%**
Series C-1 Shares *(no par value)*	197,446,100	14.71%	**0.00%**
TOTAL SHARES	**1,342,196,100**	**100.00%**	**100.00%**

Controlling Group	Series 1	80,863,359	7.32%	7.06%
	Series C-1	17,364,568		
Public Float	Series 1	1,063,886,641	92.68%	92.94%
	Series C-1	180,081,532		
TOTAL	***Series 1***	***1,144,750,000***	***100.00%***	***100.00%***
	Series C-1	***197,446,100***		

Data AR-05** ***31/12/2005

**El Puerto de Liverpool does not know who are the beneficiaries of each trusts, so that none of them can be considered as controlling shareholders of LIVERPOOL, according to the law, except by Mr. Max Michael and his Family and Mr. Enrique Brémod and his Family.*

EL PUERTO DE LIVERPOOL, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series 1 Shares *(no par value)*	1,144,750,000	85.29%	**100.00%**
Series C-1 Shares *(no par value)*	197,446,100	14.71%	**0.00%**
TOTAL SHARES	**1,342,196,100**	**100.00%**	**100.00%**

Controlling Group	Series 1	263,162,802	30.35%	22.99%
	Series C-1	144,208,777		
Public Float	Series 1	881,587,198	69.65%	77.01%
	Series C-1	53,237,323		
TOTAL	***Series 1***	***1,144,750,000***	***100.00%***	***100.00%***
	Series C-1	***197,446,100***		

DataAR-04** ***31/12/2004

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series 1 Shares *(no par value)*	1,144,750,000	85.29%	**100.00%**
Series C-1 Shares *(no par value)*	197,446,100	14.71%	**0.00%**
TOTAL SHARES	**1,342,196,100**	**100.00%**	**100.00%**

Controlling Group	Series 1	204,367,324	16.01%	17.85%
	Series C-1	10,499,371		
Controlling Group (members BOD)	Series 1	397,209,337	31.03%	34.70%
	Series C-1	19,330,141		
Public Float	Series 1	543,173,339	52.96%	47.45%
	Series C-1	167,616,588		
TOTAL	***Series 1***	***1,144,750,000***	***100.00%***	***100.00%***
	Series C-1	***197,446,100***		

* ***El Puerto de Liverpool*** *declares that from the total amount of shares Series 1 of the controlling group, 397,209,337 shares belong to some members of the BOD, while the rest of these shares (204,367,324) belong to the other controlling investors who are not part of the BOD.*

Data AR-03** ***31/12/2003

EL PUERTO DE LIVERPOOL, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2002				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series 1 Shares *(no par value)*		1,144,750,000	85.29%	**100.00%**
Series C-1 Shares *(no par value)*		197,446,100	14.71%	**0.00%**
TOTAL SHARES		**1,342,196,100**	**100.00%**	**100.00%**
Controlling Group	Series 1	213,537,324	16.69%	18.65%
	Series C-1	10,499,371		
Controlling Group (members BOD)	Series 1	489,924,337	38.06%	42.80%
	Series C-1	20,982,141		
Public Float	Series 1	441,288,339	45.24%	38.55%
	Series C-1	165,964,588		
TOTAL	***Series 1***	***1,144,750,000***	***100.00%***	***100.00%***
	Series C-1	***197,446,100***		

SHARE OWNERSHIP STRUCTURE 2001				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series 1 Shares *(no par value)*		1,144,750,000	85.29%	**100.00%**
Series C-1 Shares *(no par value)*		197,446,100	14.71%	**0.00%**
TOTAL SHARES		**1,342,196,100**	**100.00%**	**100.00%**
Controlling Group	Series 1	213,537,324	16.69%	18.65%
	Series C-1	10,499,371		
Controlling Group (members BOD)	Series 1	489,924,337	38.06%	42.80%
	Series C-1	20,982,141		
Public Float	Series 1	441,288,339	45.24%	38.55%
	Series C-1	165,964,588		
TOTAL	***Series 1***	***1,144,750,000***	***100.00%***	***100.00%***
	Series C-1	***197,446,100***		

* ***El Puerto de Liverpool*** *declares that from the total amount of shares Series 1 of the controlling group, 489,924,337 shares belong to some members of the BOD, while the rest of these shares (213,537,324) belong to the other controlling investors who are not part of the BOD.*

****Data AR-02*** ***31/12/2002***

****Data AR-02*** ***31/12/2002***

GRUPO POSADAS, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	462,778,822	80.22%	**100.00%**
Series L Shares *(no par value)*	106,748,812	18.50%	**0.00%**
Shares in company's treasury	7,360,985	1.28%	**0.00%**
TOTAL SHARES	**576,888,619**	**100.00%**	**100.00%**

FAMILY Azcárraga Andrade	Series A	236,017,199	41.44%	62.15%
	Series L	0		
****Warranty Trust***	Series A	76,680,546	13.46%	0.00%
	Series L	0		
Employees Trust	Series A	6,343,962	1.29%	0.00%
	Series L	1,017,600		
ADSs	Series A	20,000	0.01%	0.00%
	Series L	48,000		
Public Float	Series A	143,717,115	43.79%	37.85%
	Series L	105,683,212		
TOTAL	***Series A***	***462,778,822***	***100.00%***	***100.00%***
	Series L	***106,748,812***		

***** Data AR-06*** ***31/12/2006***

**The "Warranty Trust" was set as guarantee regarding a banking loan negotiated in March 2003, so that these shares cannot be voted.*

GRUPO POSADAS set a share-scheme into the "Employee Trust" for the benefit of its employees and the employees of its subsidiaries.

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	465,796,822	80.74%	**100.00%**
Series L Shares *(no par value)*	108,578,312	18.82%	**0.00%**
Shares in company's treasury	2,513,485	0.44%	**0.00%**
TOTAL SHARES	**576,888,619**	**100.00%**	**100.00%**

FAMILY Azcárraga Andrade	Series A	237,556,379	41.36%	62.05%
	Series L	0		
****Warranty Trust***	Series A	76,680,546	13.35%	0.00%
	Series L	0		
Employees Trust	Series A	6,243,762	1.26%	0.00%
	Series L	1,017,600		
ADSs	Series A	20,000	0.01%	0.00%
	Series L	48,000		
Public Float	Series A	145,296,135	44.01%	37.95%
	Series L	107,512,712		
TOTAL	***Series A***	***465,796,822***	***100.00%***	***100.00%***
	Series L	***108,578,312***		

***** Data AR-05*** ***31/12/2005***

**The "Warranty Trust" was set as guarantee regarding a banking loan negotiated in March 2003, so that these shares cannot be voted.*

GRUPO POSADAS set a share-scheme into the "Employee Trust" for the benefit of its employees and the employees of its subsidiaries.

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	466,701,522	80.90%	**100.00%**
Series L Shares *(no par value)*	108,571,612	18.82%	**0.00%**
Shares in company's treasury	1,615,485	0.28%	**0.00%**
TOTAL SHARES	**576,888,619**	**100.00%**	**100.00%**

FAMILY Azcárraga Andrade	Series A	238,017,776	41.37%	62.05%
	Series L	0		
****Warranty Trust***	Series A	76,680,546	13.33%	0.00%
	Series L	0		
Employees Trust	Series A	6,415,162	1.29%	0.00%
	Series L	1,017,600		
ADSs	Series A	20,000	0.01%	0.00%
	Series L	48,000		
Public Float	Series A	145,568,038	43.99%	37.95%
	Series L	107,506,012		
TOTAL	***Series A***	***466,701,522***	***100.00%***	***100.00%***
	Series L	***108,571,612***		

***** Data F20-04*** ***31/12/2004***

**The "Warranty Trust" was set as guarantee regarding a banking loan negotiated in March 2003, so that these shares cannot be voted.*

GRUPO POSADAS set a share-scheme into the "Employee Trust" for the benefit of its employees and the employees of its subsidiaries.

GRUPO POSADAS, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	448,644,945	80.31%	**100.00%**
Series L Shares *(no par value)*	108,716,212	19.46%	**0.00%**
Shares in company's treasury	1,257,685	0.23%	**0.00%**
TOTAL SHARES	**558,618,842**	**100.00%**	**100.00%**

FAMILY Azcárraga Andrade	Series A	228,808,922	41.05%	59.68%
	Series L	0		
****Warranty Trust***	Series A	58,410,768	10.48%	0.00%
	Series L	0		
Employees Trust	Series A	6,413,162	1.46%	0.00%
	Series L	1,746,250		
ADSs	Series A	400,000	0.08%	0.00%
	Series L	48,000		
Public Float	Series A	154,612,093	46.92%	40.32%
	Series L	106,921,962		
TOTAL	***Series A***	***448,644,945***	***100.00%***	***100.00%***
	Series L	***108,716,212***		

***** Data F20-03*** ***31/12/2003***

**The "Warranty Trust" was set as guarantee regarding a banking loan negotiated in March 2003, so that these shares cannot be voted.*

GRUPO POSADAS set a share-scheme into the "Employee Trust" for the benefit of its employees and the employees of its subsidiaries.

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	467,683,526	84.88%	**100.00%**
Series L Shares *(no par value)*	81,955,363	14.87%	**0.00%**
Shares in company's treasury	1,369,185	0.25%	**0.00%**
TOTAL SHARES	**551,008,074**	**100.00%**	**100.00%**

FAMILY Azcárraga Andrade	Series A	243,195,434	44.25%	58.35%
	Series L	0		
****Warranty Trust***	Series A	50,800,000	9.24%	0.00%
	Series L	0		
Employees Trust	Series A	80,162	0.01%	0.00%
	Series L			
ADSs	Series A		0.29%	0.00%
	Series L	1,620,000		
Public Float	Series A	173,607,930	46.20%	41.65%
	Series L	80,335,363		
TOTAL	***Series A***	***467,683,526***	***100.00%***	***100.00%***
	Series L	***81,955,363***		

***** Data F20-02*** ***31/12/2002***

**The "Warranty Trust" was set as guarantee regarding a banking loan negotiated in March 2003, so that these shares cannot be voted.*

GRUPO POSADAS set a share-scheme into the "Employee Trust" for the benefit of its employees and the employees of its subsidiaries.

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	428,183,677	79.56%	**100.00%**
Series L Shares *(no par value)*	108,403,212	20.14%	**0.00%**
Shares in company's treasury	1,621,185	0.30%	**0.00%**
TOTAL SHARES	**538,208,074**	**100.00%**	**100.00%**

FAMILY Azcárraga Andrade	Series A	222,655,512	41.49%	57.15%
	Series L	0		
****Warranty Trust***	Series A	38,000,000	7.08%	0.00%
	Series L			
Employees Trust	Series A	581,362	0.23%	0.00%
	Series L	638,700		
ADSs	Series A		0.30%	0.00%
	Series L	1,620,000		
Public Float	Series A	166,946,803	50.89%	42.85%
	Series L	106,144,512		
TOTAL	***Series A***	***428,183,677***	***100.00%***	***100.00%***
	Series L	***108,403,212***		

***** Data F20-01*** ***31/12/2001***

**The "Warranty Trust" was set as guarantee regarding a banking loan negotiated in March 2003, so that these shares cannot be voted.*

GRUPO POSADAS set a share-scheme into the "Employee Trust" for the benefit of its employees and the employees of its subsidiaries.

GRUPO SIMEC, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**0**	0.00%	**0.00%**
Series B Shares (no par value)	**421,214,706**	100.00%	**100.00%**
TOTAL SHARES	**421,214,706**	**100.00%**	**100.00%**
**** INDUSTRIAS CH, S. A. B. DE C.V.***	**260,184,672**	61.77%	**61.77%**
Tuberias PROCARSA, S.A. de C.V.	**93,977,250**	22.31%	**22.31%**
Operadora de Manufacturera de Tubos, S.A. De C.V.	**25,707,345**	6.10%	**6.10%**
Aceros Laminados Sigosa, S.A. de C.V.	**4,136,373**	0.98%	**0.98%**
SEYCO Estructuras, S.A. de C.V.	**5,847,159**	1.39%	**1.39%**
Industrial de Herramientas CH, S.A. de C.V.	**2,117,073**	0.50%	**0.50%**
Compañía Mexicana de Tubos, S.A. de C.V.	**3,629,274**	0.86%	**0.86%**
Public Float	**25,615,560**	6.08%	**6.08%**
TOTAL	**421,214,706**	**100.00%**	**100.00%**

***** Data Annual Rep 06*** ***31/12/2006***

**INDUSTRIAS CH, S.A.B. de C.V. is the controlling shareholder of GRUPO SIMEC, holding directly and indirectly (by means of its subsidiaries) roughly 84 percent of the total shares of the company.*

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**0**	0.00%	**0.00%**
Series B Shares (no par value)	**137,929,599**	100.00%	**100.00%**
TOTAL SHARES	**137,929,599**	**100.00%**	**100.00%**
**** INDUSTRIAS CH, S. A. B. DE C.V.***	**117,240,159**	85.00%	**85.00%**
Public Float	**20,689,440**	15.00%	**15.00%**
TOTAL	**137,929,599**	**100.00%**	**100.00%**

***** Data Annual Rep 05*** ***31/12/2005***

**INDUSTRIAS CH, S.A.B. de C.V. is the controlling shareholder of GRUPO SIMEC, holding around 85 percent of the total shares of the company.*

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**0**	0.00%	**0.00%**
Series B Shares (no par value)	**133,542,984**	100.00%	**100.00%**
TOTAL SHARES	**133,542,984**	**100.00%**	**100.00%**
**** INDUSTRIAS CH, S. A. B. DE C.V.***	**114,045,708**	85.40%	**85.40%**
Public Float	**19,497,276**	14.60%	**14.60%**
TOTAL	**133,542,984**	**100.00%**	**100.00%**

***** Data Annual Rep 04*** ***31/12/2004***

**INDUSTRIAS CH, S.A.B. de C.V. is the controlling shareholder of GRUPO SIMEC, holding around 85 percent of the total shares of the company.*

GRUPO SIMEC, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**0**	0.00%	**0.00%**
Series B Shares (no par value)	**131,973,022**	100.00%	**100.00%**
TOTAL SHARES	**131,973,022**	**100.00%**	**100.00%**
**** INDUSTRIAS CH, S. A. B. DE C.V.***	**111,913,123**	84.80%	**84.80%**
Public Float	**20,059,899**	15.20%	**15.20%**
TOTAL	**131,973,022**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

**INDUSTRIAS CH, S.A.B. de C.V. is the controlling shareholder of GRUPO SIMEC, holding around 85 percent of the total shares of the company.*

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**0**	0.00%	**0.00%**
Series B Shares (no par value)	**2,160,625,003**	100.00%	**100.00%**
TOTAL SHARES	**2,160,625,003**	**100.00%**	**100.00%**
**** INDUSTRIAS CH, S. A. B. DE C.V.***	**1,782,515,627**	82.50%	**82.50%**
Public Float	**378,109,376**	17.50%	**17.50%**
TOTAL	**2,160,625,003**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

**INDUSTRIAS CH, S.A.B. de C.V. is the controlling shareholder of GRUPO SIMEC, holding around 83 percent of the total shares of the company.*

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)	**200,995,159**	11.24%	**0.00%**
Series B Shares (no par value)	**1,587,456,966**	88.76%	**88.76%**
TOTAL SHARES	**1,788,452,125**	100.00%	**88.76%**
**** INDUSTRIAS CH, S. A. B. DE C.V.***	**1,475,473,003**	82.50%	**82.50%**
Public Float	**312,979,122**	17.50%	**17.50%**
TOTAL	**1,788,452,125**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

**INDUSTRIAS CH, S.A.B. de C.V. is the controlling shareholder of GRUPO SIMEC, holding around 83 percent of the total shares of the company.*

SORIANA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**1,800,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**1,800,000,000**	**100.00%**	**100.00%**
Families Martin Bringas & Martin Soberon	**1,551,154,329**	86.18%	**86.18%**
Public Float	248,845,671	13.82%	**13.82%**
TOTAL	**1,800,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**600,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Families Martin Bringas & Martin Soberon	**517,051,443**	86.18%	**86.18%**
Public Float	82,948,557	13.82%	**13.82%**
TOTAL	**600,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 05***		***31/12/2005***	

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**600,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Families Martin Bringas & Martin Soberon	**517,051,443**	86.18%	**86.18%**
Public Float	82,948,557	13.82%	**13.82%**
TOTAL	**600,000,000**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

SORIANA, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**600,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Families Martin Bringas & Martin Soberon	**489,300,793**	81.55%	**81.55%**
Public Float	110,699,207	18.45%	**18.45%**
TOTAL	**600,000,000**	**100.00%**	**100.00%**

***** Data Annual Rep 03*** ***31/12/2003***

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**600,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Families Martin Bringas & Martin Soberon	**493,162,021**	82.19%	**82.19%**
Public Float	106,837,979	17.81%	**17.81%**
TOTAL	**600,000,000**	**100.00%**	**100.00%**

***** Data Annual Rep 02*** ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series B Shares *(no par value)*	**600,000,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**600,000,000**	**100.00%**	**100.00%**
Families Martin Bringas & Martin Soberon	**504,027,881**	84.00%	**84.00%**
Public Float	95,972,119	16.00%	**16.00%**
TOTAL	**600,000,000**	**100.00%**	**100.00%**

***** Data Annual Rep 01*** ***31/12/2001***

CARSO GLOBAL TELECOM, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**3,492,470,400**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**3,492,470,400**	**100.00%**	**100.00%**
Carlos Slim Helú y Carlos, Marco Antonio y Patrick Slim Domit	**2,863,825,728**	**82.00%**	**82.00%**
Public Float	628,644,672	**18.00%**	**18.00%**
TOTAL	**3,492,470,400**	**100.00%**	**100.00%**
***** Data Annual Rep 06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**3,497,375,500**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**3,497,375,500**	**100.00%**	**100.00%**
Carlos Slim Helú y Carlos, Marco Antonio y Patrick Slim Domit	**2,867,847,910**	**82.00%**	**82.00%**
Public Float	629,527,590	**18.00%**	**18.00%**
TOTAL	**3,497,375,500**	**100.00%**	**100.00%**
***** Data Annual Rep 05***	***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**3,538,821,170**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**3,538,821,170**	**100.00%**	**100.00%**
Carlos Slim Helú y Carlos, Marco Antonio y Patrick Slim Domit	**2,866,445,148**	**81.00%**	**81.00%**
Public Float	672,376,022	**19.00%**	**19.00%**
TOTAL	**3,538,821,170**	**100.00%**	**100.00%**
***** Data Annual Rep 04***	***31/12/2004***		

CARSO GLOBAL TELECOM, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**3,632,042,000**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**3,632,042,000**	**100.00%**	**100.00%**
Carlos Slim Helú y Carlos, Marco Antonio y Patrick Slim Domit	**2,869,313,180**	**79.00%**	**79.00%**
Public Float	762,728,820	**21.00%**	**21.00%**
TOTAL	**3,632,042,000**	**100.00%**	**100.00%**
***** Data Annual Rep 03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**3,706,690,800**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**3,706,690,800**	**100.00%**	**100.00%**
Carlos Slim Helú y Carlos, Marco Antonio y Patrick Slim Domit	**2,742,951,192**	**74.00%**	**74.00%**
Public Float	963,739,608	**26.00%**	**26.00%**
TOTAL	**3,706,690,800**	**100.00%**	**100.00%**
***** Data Annual Rep 02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A-1 Shares *(no par value)*	**3,757,265,966**	100.00%	**100.00%**
Shares in company's treasury	0	0.00%	0.00%
TOTAL SHARES	**3,757,265,966**	**100.00%**	**100.00%**
Carlos Slim Helú y Carlos, Marco Antonio y Patrick Slim Domit	**2,695,086,877**	**71.73%**	**71.73%**
Public Float	1,062,179,089	**28.27%**	**28.27%**
TOTAL	**3,757,265,966**	**100.00%**	**100.00%**
***** Data Annual Rep 01***	***31/12/2001***		

TELÉFONOS DE MÉXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series AA Shares *(no par value)*	8,115,000,000	40.87%	**94.83%**
Series A Shares *(no par value)*	442,000,000	2.23%	**5.17%**
Series L Shares *(no par value)*	11,301,000,000	56.91%	**0.00%**
TOTAL SHARES	**19,858,000,000**	100.00%	**100.00%**

Carso Global TELECOM	Series AA	6,000,000,000		
	Series A	92,000,000	54.02%	**71.19%**
	Series L	4,636,000,000		
AT&T International	Series AA	1,799,500,000		
	Series A	0	9.06%	**21.03%**
	Series L	0		
Brandes Investment Partners, LP	Series AA	0		
	Series A	0	4.73%	**0.00%**
	Series L	939,700,000		
Franklin Resources, Inc.	Series AA	0		
	Series A	0	3.13%	**0.00%**
	Series L	621,300,000		
Shares Public Float	Series AA	315,500,000		
	Series A	350,000,000	29.05%	**7.78%**
	Series L	5,104,000,000		
	Series AA	***8,115,000,000***		
TOTAL	***Series A***	***442,000,000***	***100.000%***	***100.000%***
	Series L	***11,301,000,000***		

Carso Global TELECOM is deemed to control **Teléfonos de México.*

According to reposts of beneficial ownership of the company filed with the SEC, Carso Global TELECOM is controlled by Mr. Carlos Slim Helú and members of his immediate family.

*The following table sets forth the share ownership of the **officers and directors** who own more than **one percent** of any class of the capital of **Teléfonos de México**.*

Carlos Slim Helú & Carlos, Marco Antonio y Patrick Slim	Series AA	6,000,000,000		
	Series A	92,000,000	54.77%	**71.19%**
	Series L	4,784,600,000		
Antonio Cosío Ariño y Antonio Cosío Pando	Series AA	130,400,000		
	Series A	0	0.66%	**1.52%**
	Series L	0		
	Series AA	***6,130,400,000***		
Officers & Directors	***Series A***	***92,000,000***	***55.43%***	72.72%
	Series L	***4,784,600,000***		

Data AR-06 ***10/04/2007***

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series AA Shares *(no par value)*	8,115,000,000	38.61%	**94.55%**
Series A Shares *(no par value)*	468,000,000	2.23%	**5.45%**
Series L Shares *(no par value)*	12,436,000,000	59.17%	**0.00%**
TOTAL SHARES	**21,019,000,000**	100.00%	**100.00%**

Carso Global TELECOM	Series AA	6,000,000,000		
	Series A	92,000,000	48.25%	**70.98%**
	Series L	4,050,000,000		
SBC International	Series AA	1,799,500,000		
	Series A	0	8.56%	**20.97%**
	Series L	0		
Brandes Investment Partners, LP	Series AA	0		
	Series A	0	4.79%	**0.00%**
	Series L	1,007,700,000		
Franklin Resources, Inc.	Series AA	0		
	Series A	0	5.19%	**0.00%**
	Series L	1,091,600,000		
JPMorgan Chase & Co.	Series AA	0		
	Series A	0	4.42%	**0.00%**
	Series L	929,200,000		
Shares Public Float	Series AA	315,500,000		
	Series A	376,000,000	28.78%	**8.06%**
	Series L	5,357,500,000		
	Series AA	***8,115,000,000***		
TOTAL	***Series A***	***468,000,000***	***100.000%***	***100.000%***
	Series L	***12,436,000,000***		

Carso Global TELECOM is deemed to control **Teléfonos de México.*

According to reposts of beneficial ownership of the company filed with the SEC, Carso Global TELECOM is controlled by Mr. Carlos Slim Helú and members of his immediate family.

*The following table sets forth the share ownership of the **officers and directors** who own more than **one percent** of any class of the capital of **Teléfonos de México**.*

Carlos Slim Helú & Carlos, Marco Antonio y Patrick Slim	Series AA	6,000,000,000		
	Series A	92,100,000	48.44%	**70.98%**
	Series L	4,089,100,000		
Antonio Cosío Ariño	Series AA	130,400,000		
	Series A	0	0.62%	**1.52%**
	Series L	0		
	Series AA	***6,130,400,000***		
Officers & Directors	***Series A***	***92,100,000***	***49.06%***	72.50%
	Series L	***4,089,100,000***		

Data AR-05 ***08/06/2006***

TELÉFONOS DE MÉXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series AA Shares *(no par value)*	4,063,000,000	35.15%	**94.25%**
Series A Shares *(no par value)*	248,000,000	2.15%	**5.75%**
Series L Shares *(no par value)*	7,249,000,000	62.71%	**0.00%**
TOTAL SHARES	**11,560,000,000**	100.00%	**100.00%**

Carso Global TELECOM	Series AA	3,000,000,000		
	Series A	46,000,000	41.46%	**70.66%**
	Series L	1,746,200,000		
SBC International	Series AA	899,700,000		
	Series A	0	7.78%	**20.87%**
	Series L	0		
Brandes Investment Partners, LP	Series AA	0		
	Series A	0	4.47%	**0.00%**
	Series L	516,300,000		
Franklin Resources, Inc.	Series AA	0		
	Series A	0	4.98%	**0.00%**
	Series L	576,000,000		
JPMorgan Chase & Co.	Series AA	0		
	Series A	0	4.10%	**0.00%**
	Series L	474,100,000		
Shares Public Float	Series AA	163,300,000		
	Series A	202,000,000	37.21%	**8.47%**
	Series L	3,936,400,000		
TOTAL	***Series AA***	***4,063,000,000***		
	Series A	***248,000,000***	***100.000%***	***100.000%***
	Series L	***7,249,000,000***		

Carso Global TELECOM is deemed to control **Teléfonos de México.*
According to reposts of beneficial ownership of the company filed with the SEC, Carso Global TELECOM is controlled by Mr. Carlos Slim Helú and members of his immediate family.

*The following table sets forth the share ownership of the **officers and directors** who own more than **one percent** of any class of the capital of **Teléfonos de México**.*

Carlos Slim Helú & Carlos, Marco Antonio y Patrick Slim	Series AA	3,000,000,000		
	Series A	46,000,000	42.18%	**70.66%**
	Series L	1,829,500,000		
Antonio Cosío Ariño	Series AA	65,200,000		
	Series A	0	0.56%	**1.51%**
	Series L	0		
Officers & Directors	***Series AA***	***3,065,200,000***		
	Series A	***46,000,000***	***42.74%***	**72.17%**
	Series L	***1,829,500,000***		

Data AR-04 ***17/05/2005***

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series AA Shares *(no par value)*	4,063,000,000	33.44%	**94.01%**
Series A Shares *(no par value)*	259,000,000	2.13%	**5.99%**
Series L Shares *(no par value)*	7,828,000,000	64.43%	**0.00%**
TOTAL SHARES	**12,150,000,000**	100.00%	**100.00%**

Carso Global TELECOM	Series AA	3,000,000,000		
	Series A	46,000,000	37.29%	**70.48%**
	Series L	1,484,300,000		
SBC International	Series AA	899,700,000		
	Series A	0	7.40%	**20.82%**
	Series L	0		
Brandes Investment Partners, LP	Series AA	0		
	Series A	0	4.83%	**0.00%**
	Series L	587,200,000		
Franklin Resources, Inc.	Series AA	0		
	Series A	0	4.22%	**0.00%**
	Series L	512,900,000		
Shares Public Float	Series AA	163,300,000		
	Series A	213,000,000	46.25%	**8.71%**
	Series L	5,243,600,000		
TOTAL	***Series AA***	***4,063,000,000***		
	Series A	***259,000,000***	***100.000%***	***100.000%***
	Series L	***7,828,000,000***		

Carso Global TELECOM is deemed to control **Teléfonos de México.*
According to reposts of beneficial ownership of the company filed with the SEC, Carso Global TELECOM is controlled by Mr. Carlos Slim Helú and members of his immediate family.

*The following table sets forth the share ownership of the **officers and directors** who own more than **one percent** of any class of the capital of **Teléfonos de México**.*

Carlos Slim Helú & Carlos, Marco Antonio y Patrick Slim	Series AA	3,000,000,000		
	Series A	46,000,000	37.44%	**70.48%**
	Series L	1,502,800,000		
Antonio Cosío Ariño	Series AA	65,200,000		
	Series A	0	0.54%	**1.51%**
	Series L	0		
Officers & Directors	***Series AA***	***3,065,200,000***		
	Series A	***46,000,000***	***37.98%***	**71.99%**
	Series L	***1,502,800,000***		

Data AR-03 ***06/06/2004***

TELÉFONOS DE MÉXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series AA Shares *(no par value)*	4,136,000,000	32.90%	**93.55%**
Series A Shares *(no par value)*	285,000,000	2.27%	**6.45%**
Series L Shares *(no par value)*	8,152,000,000	64.84%	**0.00%**
TOTAL SHARES	**12,573,000,000**	100.00%	**100.00%**

Carso Global TELECOM	Series AA	3,000,000,000		
	Series A	46,000,000	33.16%	**68.90%**
	Series L	1,123,000,000		
SBC International	Series AA	972,800,000		
	Series A	0	7.74%	**22.00%**
	Series L	0		
Brandes Investment Partners, LP	Series AA	0		
	Series A	0	5.10%	**0.00%**
	Series L	640,800,000		
Franklin Resources, Inc.	Series AA	0		
	Series A	0	3.30%	**0.00%**
	Series L	414,600,000		
Shares Public Float	Series AA	163,200,000		
	Series A	239,000,000	50.71%	**9.10%**
	Series L	5,973,600,000		
	Series AA	***4,136,000,000***		
TOTAL	***Series A***	***285,000,000***	***100.000%***	***100.000%***
	Series L	***8,152,000,000***		

Carso Global TELECOM is deemed to control **Teléfonos de México.*

According to reposts of beneficial ownership of the company filed with the SEC, Carso Global TELECOM is controlled by Mr. Carlos Slim Helú and members of his immediate family.

*The following table sets forth the share ownership of the **officers and directors** who own more than **one percent** of any class of the capital of **Teléfonos de México**.*

Carlos Slim Helú & Carlos, Marco Antonio y Patrick Slim	Series AA	3,000,000,000		
	Series A	46,000,000	33.31%	**68.90%**
	Series L	1,141,500,000		
Antonio Cosío Ariño	Series AA	65,200,000		
	Series A	0	0.52%	**1.47%**
	Series L	0		
Officers & Directors	***Series AA***	***3,065,200,000***		
	Series A	***46,000,000***	***33.82%***	**70.37%**
	Series L	***1,141,500,000***		

Data AR-02 ***30/04/2003***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series AA Shares *(no par value)*	4,268,000,000	32.65%	**93.27%**
Series A Shares *(no par value)*	308,000,000	2.36%	**6.73%**
Series L Shares *(no par value)*	8,495,000,000	64.99%	**0.00%**
TOTAL SHARES	**13,071,000,000**	100.00%	**100.00%**

Carso Global TELECOM	Series AA	3,000,000,000		
	Series A	46,000,000	31.62%	**66.56%**
	Series L	1,086,900,000		
SBC International	Series AA	1,059,900,000		
	Series A	0	8.11%	**23.16%**
	Series L	0		
Brandes Investment Partners, LP	Series AA	0		
	Series A	0	5.41%	**0.00%**
	Series L	707,400,000		
Franklin Resources, Inc.	Series AA	0		
	Series A	0	3.65%	**0.00%**
	Series L	476,500,000		
Shares Public Float	Series AA	208,100,000		
	Series A	262,000,000	51.21%	**10.27%**
	Series L	6,224,200,000		
	Series AA	***4,268,000,000***		
TOTAL	***Series A***	***308,000,000***	***100.000%***	***100.000%***
	Series L	***8,495,000,000***		

Carso Global TELECOM is deemed to control **Teléfonos de México.*

According to reposts of beneficial ownership of the company filed with the SEC, Carso Global TELECOM is controlled by Mr. Carlos Slim Helú and members of his immediate family.

*The following table sets forth the share ownership of the **officers and directors** who own more than **one percent** of any class of the capital of **Teléfonos de México**.*

Carlos Slim Helú & Carlos, Marco Antonio y Patrick Slim	Series AA	3,000,000,000		
	Series A	46,000,000	31.66%	**66.56%**
	Series L	1,092,900,000		
Antonio Cosío Ariño	Series AA	65,200,000		
	Series A	0	0.50%	**1.42%**
	Series L	0		
Officers & Directors	***Series AA***	***3,065,200,000***		
	Series A	***46,000,000***	***32.16%***	**67.99%**
	Series L	***1,092,900,000***		

Data AR-01 ***30/04/2002***

GRUPO TELEVISA, S.A.B.

SHARE OWNERSHIP STRUCTURE 2006				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*		112,923,156,365	33.83%	**68.14%**
Series B Shares *(no par value)*		52,806,617,049	15.82%	**31.86%**
Series D Shares *(no par value)*		84,010,468,901	25.17%	**0.00%**
Series L Shares *(no par value)*		84,010,468,901	25.17%	**0.00%**
TOTAL SHARES		**333,750,711,216**	100.00%	**100.00%**
Shareholders Trust	**Series A**	54,649,375,593	18.29%	**75.10%**
	Series B	1,526,458,516		
	Series D	2,428,456,730		
	Series L	2,428,456,730		
Morgan Stanley Investment Mngt, Inc	Series A	3,677,147,625	5.16%	**0.00%**
	Series B	3,235,889,910		
	Series D	5,148,006,675		
	Series L	5,148,006,675		
Capital Research & Mgmt Co.	Series A	6,424,000,000	9.01%	**0.00%**
	Series B	5,653,120,000		
	Series D	8,993,600,000		
	Series L	8,993,600,000		
CPOs Public Float	Series A	48,171,547,825	67.55%	**24.90%**
	Series B	42,390,962,086		
	Series D	67,440,166,955		
	Series L	67,440,166,955		
Shares Public Float	Series A	1,085,322	0.00%	**0.00%**
	Series B	186,537		
	Series D	238,541		
	Series L	238,541		

SHARE OWNERSHIP STRUCTURE 2005				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*		114,599,087,440	33.55%	**67.86%**
Series B Shares *(no par value)*		54,281,436,395	15.89%	**32.14%**
Series D Shares *(no par value)*		86,356,772,406	25.28%	**0.00%**
Series L Shares *(no par value)*		86,356,772,406	25.28%	**0.00%**
TOTAL SHARES		**341,594,068,647**	100.00%	**100.00%**
Shareholders Trust	**Series A**	54,649,375,593	17.87%	**72.97%**
	Series B	1,526,458,516		
	Series D	2,428,456,730		
	Series L	2,428,456,730		
Morgan Stanley Investment Mngt, Inc	Series A	3,435,215,250	4.71%	**0.00%**
	Series B	3,022,989,420		
	Series D	4,809,301,350		
	Series L	4,809,301,350		
MFC Investment Management	Series A	3,266,224,500	4.47%	**0.00%**
	Series B	2,874,277,560		
	Series D	4,572,714,300		
	Series L	4,572,714,300		
CPOs Public Float	Series A	53,247,186,775	72.95%	**27.03%**
	Series B	46,857,524,362		
	Series D	74,546,061,485		
	Series L	74,546,061,485		
Shares Public Float	Series A	1,085,322	0.00%	**0.00%**
	Series B	186,537		
	Series D	238,541		
	Series L	238,541		

SHARE OWNERSHIP STRUCTURE 2004				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*		114,733,004,440	33.53%	**67.84%**
Series B Shares *(no par value)*		54,399,283,355	15.90%	**32.16%**
Series D Shares *(no par value)*		86,544,256,206	25.29%	**0.00%**
Series L Shares *(no par value)*		86,544,256,206	25.29%	**0.00%**
TOTAL SHARES		**342,220,800,207**	100.00%	**100.00%**
Shareholders Trust	**Series A**	62,006,754,804	27.90%	**79.65%**
	Series B	8,000,952,231		
	Series D	12,728,787,641		
	Series L	12,728,787,641		
Capital Research & Mgmt Co.	Series A	3,799,350,000	5.20%	**0.00%**
	Series B	3,343,428,000		
	Series D	5,319,090,000		
	Series L	5,319,090,000		
AMVESCAP, PLC	Series A	3,472,909,500	4.75%	**0.00%**
	Series B	3,056,160,360		
	Series D	4,862,073,300		
	Series L	4,862,073,300		
CPOs Public Float	Series A	45,453,029,814	62.16%	**20.35%**
	Series B	39,998,666,227		
	Series D	63,634,241,724		
	Series L	63,634,241,724		
Shares Public Float	Series A	960,322	0.00%	**0.00%**
	Series B	76,537		
	Series D	63,541		
	Series L	63,541		

TOTAL	***Series A***	***112,923,156,365***	***100.000%***	***100.000%***
	Series B	***52,806,617,049***		
	Series D	***84,010,468,901***		
	Series L	***84,010,468,901***		
Azcárraga Trust	Series A	52,991,825,693	15.96%	**74.22%**
	Series B	67,814,604		
	Series D	107,886,870		
	Series L	107,886,870		
Inbursa Trust	Series A	1,657,549,900	2.32%	**0.88%**
	Series B	1,458,643,912		
	Series D	2,320,569,860		
	Series L	2,320,569,860		
Investor Trust	Series A		0.00%	**0.00%**
	Series B			
	Series D			
	Series L			
Shareholder s Trust	***Series A***	***54,649,375,593***	***18.29%***	**75.10%**
	Series B	***1,526,458,516***		
	Series D	***2,428,456,730***		
	Series L	***2,428,456,730***		

*Approximately **45.02%** of the outstanding A Shares, **2.66%** of the outstanding B Shares, **2.78%** of the outstanding D Shares and **2.78%** of the outstanding L Shares are held through **the Stockholder Trust**, including shares in the form of CPOs. The beneficiaries of the Stockholder Trust are a trust for the benefit of Emilio Azcárraga Jean, or the Azcárraga Trust, and a trust for the benefit of **Promotora Inbursa, S.A. de C.V.,** or the Inbursa Trust. The Azcárraga Trust beneficially owns 87.29% of the Televisa shares held through the Stockholder Trust, while the Inbursa Trust beneficially owns 12.71%.*

***** Data F20-06*** ***31/12/2006***

TOTAL	***Series A***	***114,599,087,440***	***100.000%***	***100.000%***
	Series B	***54,281,436,395***		
	Series D	***86,356,772,406***		
	Series L	***86,356,772,406***		
Azcárraga Trust	Series A	52,991,825,693	15.60%	**72.11%**
	Series B	67,814,604		
	Series D	107,886,870		
	Series L	107,886,870		
Inbursa Trust	Series A	1,657,549,900	2.27%	**0.86%**
	Series B	1,458,643,912		
	Series D	2,320,569,860		
	Series L	2,320,569,860		
Investor Trust	Series A		0.00%	**0.00%**
	Series B			
	Series D			
	Series L			
Shareholder s Trust	***Series A***	***54,649,375,593***	***17.87%***	**72.97%**
	Series B	***1,526,458,516***		
	Series D	***2,428,456,730***		
	Series L	***2,428,456,730***		

*On August 17, 2005, the **"Investor Trust"** released its Shares held in the Shareholder Trust, which represented **19.84%** of the Shares held then through the **Shareholder Trust**. **The Azcárraga Trust** beneficially owns **87.29%** of the Televisa shares held through the Shareholder Trust and the Inbursa Trust beneficially owns 12.71% of the **Televisa** shares held through the Shareholder Trust. Televisa shares held through the Shareholder Trust are voted by the trustee as instructed by a Technical Committee comprising four members — three appointed by the Azcárraga Trust and one appointed by the Inbursa Trust. As long as non-Mexicans own more than a minimal number of A Shares, Mr. Azcárraga Jean will control the majority of A Shares and certain key matters including **dividend payments, mergers, spin-offs, changes in corporate purpose, changes of nationality and amendments to the anti-takeover provisions of our bylaws**, which require his vote in favour.*

***** Data F20-05*** ***31/12/2005***

TOTAL	***Series A***	***114,733,004,440***	***100.000%***	***100.000%***
	Series B	***54,399,283,355***		
	Series D	***86,544,256,206***		
	Series L	***86,544,256,206***		
Azcárraga Trust	Series A	52,991,825,693	15.57%	**74.96%**
	Series B	67,814,604		
	Series D	107,886,870		
	Series L	107,886,870		
Inbursa Trust	Series A	4,972,649,700	6.80%	**2.59%**
	Series B	4,375,931,745		
	Series D	6,961,709,595		
	Series L	6,961,709,595		
Investor Trust	Series A	4,042,279,411	5.53%	**2.10%**
	Series B	3,557,205,882		
	Series D	5,659,191,176		
	Series L	5,659,191,176		
Shareholder s Trust	***Series A***	***62,006,754,804***	***27.90%***	**79.65%**
	Series B	***8,000,952,231***		
	Series D	***12,728,787,641***		
	Series L	***12,728,787,641***		

*Televicentro's equity in Televisa is currently owned through **the Shareholder Trust**, by the following trusts: a trust for the benefit of **Emilio Azcárraga Jean,** the Azcárraga Trust; a trust for the benefit of **Promotora Inbursa S.A. de C.V.**, the Inbursa Trust; and a trust for the benefit of five individual members of the **Aramburuzabala and Fernández families**, the Investor Trust. Approximately 49.87% of the outstanding A Shares, 13.35% of the outstanding B Shares, 13.90% of the outstanding D Shares and 13.90% of the outstanding L Shares of TLEVISA are held through a this trust, including shares in the form of CPOs. The shares held through the Shareholder Trust are voted by the **trustee** as instructed by a **Technical Committee comprising five members** — three appointed by the Azcárraga Trust and one appointed by each of the Inbursa Trust and the Investor Trust.*

***** Data F20-04*** ***31/12/2004***

GRUPO TELEVISA, S.A.B.

SHARE OWNERSHIP STRUCTURE 2003				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*		4,467,109,061	50.70%	**100.00%**
Series B Shares *(no par value)*		0	0.00%	**0.00%**
Series D Shares *(no par value)*		2,171,632,182	24.65%	**0.00%**
Series L Shares *(no par value)*		2,171,632,182	24.65%	**0.00%**
TOTAL SHARES		**8,810,373,425**	100.00%	**100.00%**
Grupo Televicentro SA de CV	**Series A**	2,348,235,209	27.85%	**100.00%**
	Series B	0		
	Series D	52,806,227		
	Series L	52,806,227		
Janus Capital Corporation	Series A	143,861,820	4.90%	**0.00%**
	Series B	0		
	Series D	143,861,820		
	Series L	143,861,820		
Capital Group Internationa l Inc.	Series A	116,053,520	3.95%	**0.00%**
	Series B	0		
	Series D	116,053,520		
	Series L	116,053,520		
Capital Research & Mgmt Co.	Series A	161,786,000	5.51%	**0.00%**
	Series B			
	Series D	161,786,000		
	Series L	161,786,000		
Shares Public Float	Series A	1,697,124,615	57.79%	**0.00%**
	Series B	0		
	Series D	1,697,124,615		
	Series L	1,697,124,615		

SHARE OWNERSHIP STRUCTURE 2002				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares (no par value)		4,464,612,424	50.72%	**100.00%**
Series B Shares (no par value)		0	0.00%	**0.00%**
Series D Shares (no par value)		2,169,110,325	24.64%	**0.00%**
Series L Shares (no par value)		2,169,110,325	24.64%	**0.00%**
TOTAL SHARES		**8,802,833,074**	100.00%	**100.00%**
Grupo Televicentro SA de CV	**Series A**	2,349,826,492	27.93%	**100.00%**
	Series B	0		
	Series D	54,397,510		
	Series L	54,397,510		
Janus Capital Manageme nt	Series A	175,185,820	5.97%	**0.00%**
	Series B	0		
	Series D	175,185,820		
	Series L	175,185,820		
Capital Group Internationa l Inc.	Series A	215,951,440	7.36%	**0.00%**
	Series B	0		
	Series D	215,951,440		
	Series L	215,951,440		
Capital Research & Mgmt Co.	Series A	161,786,000	5.51%	**0.00%**
	Series B	0		
	Series D	161,786,000		
	Series L	161,786,000		
Shares Public Float	Series A	1,561,789,555	53.23%	**0.00%**
	Series B	0		
	Series D	1,561,789,555		
	Series L	1,561,789,555		

SHARE OWNERSHIP STRUCTURE 2001				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*		4,482,392,507	50.61%	**100.00%**
Series B Shares *(no par value)*		0	0.00%	**0.00%**
Series D Shares *(no par value)*		2,186,933,525	24.69%	**0.00%**
Series L Shares *(no par value)*		2,186,933,525	24.69%	**0.00%**
TOTAL SHARES		**8,856,259,557**	100.00%	**100.00%**
Grupo Televicentro SA de CV	**Series A**	2,349,826,492	27.76%	**100.00%**
	Series B	0		
	Series D	54,397,510		
	Series L	54,397,510		
Janus Capital Corporation	Series A	426,513,520	14.45%	**0.00%**
	Series B	0		
	Series D	426,513,520		
	Series L	426,513,520		
Capital Group Internationa l Inc.	Series A	244,861,940	8.29%	**0.00%**
	Series B	0		
	Series D	244,861,940		
	Series L	244,861,940		
Capital Research & Mgmt Co.	Series A	144,326,000	4.89%	**0.00%**
	Series B	0		
	Series D	144,326,000		
	Series L	144,326,000		
Shares Public Float	Series A	1,316,834,555	44.61%	**0.00%**
	Series B	0		
	Series D	1,316,834,555		
	Series L	1,316,834,555		

TOTAL	Series A	47,897	0.00%	**0.00%**
	Series B	0		
	Series D	0		
	Series L	0		
TOTAL	***Series A***	***4,467,109,061***	***100.00%***	***100.00%***
	Series B	***0***		
	Series D	***2,171,632,182***		
	Series L	***2,171,632,182***		

The ownership of Televicentro's equity is currently held through the Shareholder Trust, for the benefit of ***the Azcárraga Trust, the Inbursa Trust*** *and the Investor Trust, as follows: the Azcárraga Trust 55.29% ; the Inbursa Trust 24.70% ; and the Investor Trust 20.01% . The Investor Trust holds the interests of the Aramburuzabala family (16.21%) and the Fernández family (3.80%). Emilio Azcárraga Jean is the sole beneficiary of the Azcárraga Trust and has sole power to determine the investment and voting decisions made by the trust.*

***** Data F20-03*** ***31/12/2003***

TOTAL	Series A	73,117	0.001%	**0.002%**
	Series B	0		
	Series D	0		
	Series L	0		
TOTAL	***Series A***	***4,464,612,424***	***100.00%***	***100.00%***
	Series B	***0***		
	Series D	***2,169,110,325***		
	Series L	***2,169,110,325***		

The ownership of Televicentro's equity is currently as follows: **** Emilio Azcárraga Jean*** *owns* ***55.29%*** *, the* ***SINCA Inbursa Trust*** *owns* ***24.70%*** *, the* ***Aramburuzabala family*** *owns* ***16.21%*** *and the* ***Investor Trust*** *owns* ***20.01%.*** *Families Aramburuzabala (16.21%) and Fernández (3.80%) are the only beneficiaries of the Investor trust. The* ***SINCA Inbursa Trust*** *has agreed to vote its 24.70% stock interest in the same manner as Emilio Azcárraga Jean votes , as long as Mr. Azcárraga Jean owns at least* ***27.0%*** *of the capital stock of Televicentro.*

***** Data F20-02*** ***31/12/2002***

TOTAL	Series A	30,000	0.000%	**0.001%**
	Series B	0		
	Series D	0		
	Series L	0		
TOTAL	***Series A***	***4,482,392,507***	***100.00%***	***100.00%***
	Series B	***0***		
	Series D	***2,186,933,525***		
	Series L	***2,186,933,525***		

The ownership of Televicentro's equity is currently as follows: **** Emilio Azcárraga Jean*** *owns* ***55.29%*** *, the* ***SINCA Inbursa Trus*** *t owns* ***24.70%*** *, the* ***Aramburuzabala family*** *owns* ***16.21%*** *and the* ***Fernández family*** *owns* ***3.80%*** *. The SINCA Inbursa Trust has agreed to vote its 24.70% stock interest in the same manner as Emilio Azcárraga Jean votes , as long as Mr. Azcárraga Jean owns at least 27.0% of the capital stock of Televicentro. The interests of the Aramburuzabala and Fernández families are held through the Investor Trust .*

***** Data F20-01*** ***31/12/2001***

TV AZTECA, S.A. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	4,589,900,390	43.52%	**100.00%**
Series D-A Shares *(no par value)*	2,120,017,487	20.10%	**0.00%**
Series D-L Shares *(no par value)*	2,120,017,487	20.10%	**0.00%**
Shares in company's treasury	1,715,899,630	16.27%	**0.00%**
TOTAL SHARES	**10,545,834,994**	100.00%	**100.00%**

Azteca Holdings	Series A	3,122,109,129	45.16%	**92.24%**
	Series D-A CPOs	820,151,848		
	Series D-L CPOs	820,151,848		
Ricardo Salinas Pliego	Series A	167,400,041	4.32%	**3.65%**
	Series D-A CPOs	144,147,949		
	Series D-L CPOs	144,147,949		
Grupo Desarrollo Inmobiliario Salinas	Series A	188,900,281	2.63%	**4.12%**
	Series D-A CPOs	44,226,751		
	Series D-L CPOs	44,226,751		
CPOs Public Float	Series A	1,111,490,939	31.62%	**0.00%**
	Series D-A CPOs	1,111,490,939		
	Series D-L CPOs	1,111,490,939		
TOTAL	**Series A**	***4,589,900,390***	***83.73%***	***100.00%***
	Series D-A CPOs	***2,120,017,487***		
	Series D-L CPOs	***2,120,017,487***		

**The CPOs, each representing one A Share, one D-A Share and one D-L Share, are traded on the Mexican Stock Exchange*

*With the exception of **Mr. Ricardo B. Salinas Pliego**, there are **no directors or officers** who beneficially own more than 1% of TV Azteca's shares.*

As of May 2007, Azteca Holdings -a controlled company by Mr. Ricardo B. Salinas Pliego- owns Grupo Desarrollo Inmobiliario Salinas (known before as Grupo COTSA), which is a subsidiary of Azteca Holdings.

Data AR-06 31/12/2006

SHARE OWNERSHIP STRUCTURE 2005

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	4,638,973,690	43.99%	**100.00%**
Series D-A Shares *(no par value)*	2,169,090,787	20.57%	**0.00%**
Series D-L Shares *(no par value)*	2,169,090,787	20.57%	**0.00%**
Shares in company's treasury	1,568,679,730	14.87%	**0.00%**
TOTAL SHARES	**10,545,834,994**	100.00%	**100.00%**

Azteca Holdings	Series A	3,122,109,129	45.16%	**92.32%**
	Series D-A CPOs	820,151,848		
	Series D-L CPOs	820,151,848		
Ricardo Salinas Pliego	Series A	167,400,041	4.32%	**3.61%**
	Series D-A CPOs	144,147,949		
	Series D-L CPOs	144,147,949		
Grupo Desarrollo Inmobiliario Salinas	Series A	188,900,281	2.63%	**4.07%**
	Series D-A CPOs	44,226,751		
	Series D-L CPOs	44,226,751		
CPOs Public Float	Series A	1,160,564,239	33.01%	**0.00%**
	Series D-A CPOs	1,160,564,239		
	Series D-L CPOs	1,160,564,239		
TOTAL	**Series A**	***4,638,973,690***	***85.13%***	***100.00%***
	Series D-A CPOs	***2,169,090,787***		
	Series D-L CPOs	***2,169,090,787***		

**The CPOs, each representing one A Share, one D-A Share and one D-L Share, are traded on the Mexican Stock Exchange*

*With the exception of **Mr. Ricardo B. Salinas Pliego**, there are **no directors or officers** who beneficially own more than 1% of TV Azteca's shares.*

As of May 2006, Azteca Holdings -a controlled company by Mr. Ricardo B. Salinas Pliego- owns Grupo Desarrollo Inmobiliario Salinas (known before as Grupo COTSA), which is a subsidiary of Azteca Holdings.

Data AR-05 31/12/2005

TV AZTECA, S.A. DE C.V.

SHARE OWNERSHIP STRUCTURE 2004

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	4,699,453,589	43.45%	**100.00%**
Series D-A Shares *(no par value)*	2,229,570,687	20.61%	**0.00%**
Series D-L Shares *(no par value)*	2,229,570,687	20.61%	**0.00%**
Shares in company's treasury	1,657,240,031	15.32%	**0.00%**
TOTAL SHARES	**10,815,834,994**	100.00%	**100.00%**

Azteca Holdings	Series A	3,122,109,128	44.03%	**92.45%**
	Series D-A CPOs	820,151,848		
	Series D-L CPOs	820,151,848		
Ricardo Salinas Pliego	Series A	165,900,041	4.17%	**3.53%**
	Series D-A CPOs	142,647,949		
	Series D-L CPOs	142,647,949		
Alternativas COTSA	Series A	188,900,281	2.56%	**4.02%**
	Series D-A CPOs	44,226,751		
	Series D-L CPOs	44,226,751		
CPOs Public Float	Series A	1,222,544,139	33.91%	**0.00%**
	Series D-A CPOs	1,222,544,139		
	Series D-L CPOs	1,222,544,139		
TOTAL	**Series A**	***4,699,453,589***		
	Series D-A CPOs	***2,229,570,687***	***84.68%***	***100.00%***
	Series D-L CPOs	***2,229,570,687***		

**The CPOs, each representing one A Share, one D-A Share and one D-L Share, are traded on the Mexican Stock Exchange*

With the exception of ***Mr. Ricardo B. Salinas Pliego****, there are* ***no directors or officers*** *who beneficially own more than 1% of TV Azteca's shares.*

As of May 2005, Azteca Holdings -a controlled company by Mr. Ricardo B. Salinas Pliego- owns Alternativas COTSA (known before as Grupo COTSA), which is a subsidiary of Azteca Holdings.

Data AR-04 ***31/12/2004***

SHARE OWNERSHIP STRUCTURE 2003

Class of Shares	no. shares	Percentage Capital	Percentage REAL Voting
Series A Shares *(no par value)*	4,703,278,513	43.49%	**100.00%**
Series D-A Shares *(no par value)*	2,233,395,611	20.65%	**0.00%**
Series D-L Shares *(no par value)*	2,233,395,611	20.65%	**0.00%**
Shares in company's treasury	1,645,765,259	15.22%	**0.00%**
TOTAL SHARES	**10,815,834,994**	100.00%	**100.00%**

Azteca Holdings	Series A	3,119,793,128	43.97%	**92.46%**
	Series D-A CPOs	817,835,848		
	Series D-L CPOs	817,835,848		
Ricardo Salinas Pliego	Series A	165,882,192	4.17%	**3.53%**
	Series D-A CPOs	142,630,100		
	Series D-L CPOs	142,630,100		
Grupo COTSA	Series A	188,900,281	2.56%	**4.02%**
	Series D-A CPOs	44,226,751		
	Series D-L CPOs	44,226,751		
CPOs Public Float	Series A	1,228,702,912	34.08%	**0.00%**
	Series D-A CPOs	1,228,702,912		
	Series D-L CPOs	1,228,702,912		
TOTAL	**Series A**	***4,703,278,513***		
	Series D-A CPOs	***2,233,395,611***	***84.78%***	***100.00%***
	Series D-L CPOs	***2,233,395,611***		

**The CPOs, each representing one A Share, one D-A Share and one D-L Share, are traded on the Mexican Stock Exchange*

Grupo COTSA is a wholly-owned subsidiary of Azteca Holdings

With the exception of ***Mr. Ricardo B. Salinas Pliego****, there are* ***no directors or officers*** *who beneficially own more than 1% of TV Azteca's shares.*

Data F20-03 ***31/12/2003***

TV AZTECA, S.A. DE C.V.

SHARE OWNERSHIP STRUCTURE 2002

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	4,668,790,769	43.17%	**100.00%**
Series D-A Shares *(no par value)*	2,198,907,871	20.33%	**0.00%**
Series D-L Shares *(no par value)*	2,198,907,871	20.33%	**0.00%**
Shares in company's treasury	1,749,228,483	16.17%	**0.00%**
TOTAL SHARES	**10,815,834,994**	100.00%	**100.00%**

Azteca Holdings	Series A	3,163,693,409	44.38%	**92.40%**
	Series D-A CPOs	818,062,599		
	Series D-L CPOs	818,062,599		
Ricardo Salinas Pliego	Series A	165,882,192	4.17%	**3.55%**
	Series D-A CPOs	142,630,100		
	Series D-L CPOs	142,630,100		
Grupo COTSA	Series A	189,000,000	2.56%	**4.05%**
	Series D-A CPOs	44,000,000		
	Series D-L CPOs	44,000,000		
CPOs Public Float	Series A	1,150,215,168	32.72%	**0.00%**
	Series D-A CPOs	1,194,215,172		
	Series D-L CPOs	1,194,215,172		
TOTAL	**Series A**	***4,668,790,769***	***83.83%***	***100.00%***
	Series D-A CPOs	***2,198,907,871***		
	Series D-L CPOs	***2,198,907,871***		

**The CPOs, each representing one A Share, one D-A Share and one D-L Share, are traded on the Mexican Stock Exchange*

Grupo COTSA is a wholly-owned subsidiary of Azteca Holdings

*With the exception of **Mr. Ricardo B. Salinas Pliego**, there are **no directors or officers** who beneficially own more than 1% of TV Azteca's shares.*

Data F20-02 ***31/12/2002***

SHARE OWNERSHIP STRUCTURE 2001

Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**4,668,790,769**	43.17%	**100.00%**
Series D-A Shares *(no par value)*	**2,198,907,871**	20.33%	**0.00%**
Series D-L Shares *(no par value)*	**2,198,907,871**	20.33%	**0.00%**
Shares in company's treasury	1,749,228,483	16.17%	**0.00%**
TOTAL SHARES	**10,815,834,994**	100.00%	**100.00%**

Azteca Holdings	Series A	3,163,693,405	44.38%	**92.40%**
	Series D-A CPOs	818,062,599		
	Series D-L CPOs	818,062,599		
Ricardo Salinas Pliego	Series A	165,882,192	4.17%	**3.55%**
	Series D-A CPOs	142,630,100		
	Series D-L CPOs	142,630,100		
Grupo COTSA	Series A	189,000,000	2.56%	**4.05%**
	Series D-A CPOs	44,000,000		
	Series D-L CPOs	44,000,000		
CPOs Public Float	Series A	1,150,215,172	32.72%	**0.00%**
	Series D-A CPOs	1,194,215,172		
	Series D-L CPOs	1,194,215,172		
TOTAL	**Series A**	***4,668,790,769***	***83.83%***	***100.00%***
	Series D-A CPOs	***2,198,907,871***		
	Series D-L CPOs	***2,198,907,871***		

**The CPOs, each representing one A Share, one D-A Share and one D-L Share, are traded on the Mexican Stock Exchange*

Grupo COTSA is a wholly-owned subsidiary of Azteca Holdings

*With the exception of **Mr. Ricardo B. Salinas Pliego**, there are **no directors or officers** who beneficially own more than 1% of TV Azteca's shares.*

Data AR-01 ***31/12/2001***

VITRO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**341,026,871**	88.15%	**100.00%**
Shares in company's treasury	28,319,069	7.32%	0.00%
"Stock Options Trust"	17,511,203	4.53%	0.00%
TOTAL SHARES	**386,857,143**	**100.00%**	**100.00%**
Families Sada Gonzalez & Sada Treviño	**91,747,065**	26.90%	**52.18%**
CPOs	86,200,000	25.28%	**0.00%**
Public Float	163,079,806	47.82%	**47.82%**
TOTAL	**341,026,871**	**100.00%**	**100.00%**
***** Data F20-06***	***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**273,400,000**	84.38%	**100.00%**
Shares in company's treasury	28,300,000	8.73%	0.00%
"Stock Options Trust"	22,300,000	6.88%	0.00%
TOTAL SHARES	**324,000,000**	**100.00%**	**100.00%**
Families Sada Gonzalez & Sada Treviño	**85,180,635**	31.16%	**57.13%**
CPOs	71,000,000	25.97%	**0.00%**
Public Float	117,219,365	42.87%	**42.87%**
TOTAL	**273,400,000**	**100.00%**	**100.00%**
***** Data F20-05***		***31/12/2005***	

SHARE OWNERSHIP STRUCTURE 2004			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**273,000,000**	84.26%	**100.00%**
Shares in company's treasury	28,300,000	8.73%	0.00%
"Stock Options Trust"	22,700,000	7.01%	0.00%
TOTAL SHARES	**324,000,000**	**100.00%**	**100.00%**
Families Sada Gonzalez & Sada Treviño	**82,582,929**	30.25%	**60.25%**
CPOs	81,900,000	30.00%	**0.00%**
Public Float	108,517,071	39.75%	**39.75%**
TOTAL	**273,000,000**	**100.00%**	**100.00%**
***** Data F20-04***	***31/12/2004***		

VITRO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**271,000,000**	83.64%	**100.00%**
Shares in company's treasury	28,300,000	8.73%	0.00%
"Stock Options Trust"	24,700,000	7.62%	0.00%
TOTAL SHARES	**324,000,000**	**100.00%**	**100.00%**
Families Sada Gonzalez & Sada Treviño	**82,082,096**	30.29%	**52.32%**
CPOs	59,700,000	22.03%	**0.00%**
Public Float	129,217,904	47.68%	**47.68%**
TOTAL	**271,000,000**	**100.00%**	**100.00%**
***** Data F20-03***	***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**276,000,000**	85.19%	**100.00%**
Shares in company's treasury	23,300,000	7.19%	0.00%
"Stock Options Trust"	24,700,000	7.62%	0.00%
TOTAL SHARES	**324,000,000**	**100.00%**	**100.00%**
Families Sada Gonzalez & Sada Treviño	**85,840,354**	31.10%	**55.56%**
CPOs	67,500,000	24.46%	**0.00%**
Public Float	122,659,646	44.44%	**44.44%**
TOTAL	**276,000,000**	**100.00%**	**100.00%**
***** Data F20-02***	***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001			
Class of Shares	*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series A Shares *(no par value)*	**273,700,000**	84.48%	**100.00%**
Shares in company's treasury	25,600,000	7.90%	0.00%
"Stock Options Trust"	24,700,000	7.62%	0.00%
TOTAL SHARES	**324,000,000**	**100.00%**	**100.00%**
Families Sada Gonzalez & Sada Treviño	**83,097,454**	30.36%	**57.98%**
CPOs	75,600,000	27.62%	**0.00%**
Public Float	115,002,546	42.02%	**42.02%**
TOTAL	**273,700,000**	**100.00%**	**100.00%**
***** Data F20-01***	***31/12/2001***		

WAL*MART DE MEXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2006				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series V Shares *(no par value)*		**8,445,307,985**	98.52%	**100.00%**
Series C Shares *(no par value)*		**0**	0.00%	0.00%
Share-option personnel scheme		127,060,583	1.48%	0.00%
TOTAL SHARES		**8,572,368,568**	**100.00%**	**100.00%**
Intersalt, S. de R.L. de C.V.	Series V	5,766,000,000	68.27%	**68.27%**
	Series C	0		
Public Float	Series V	2,679,307,985	31.73%	**31.73%**
	Series C	0		
TOTAL	***Series V***	***8,445,307,985***	***100.00%***	***100.00%***
	Series C	***0***		
***** Data Annual Rep 06***		***31/12/2006***		

SHARE OWNERSHIP STRUCTURE 2005				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series V Shares *(no par value)*		**4,261,064,135**	98.57%	**100.00%**
Series C Shares *(no par value)*		**0**	0.00%	0.00%
Share-option personnel scheme		61,894,000	1.43%	0.00%
TOTAL SHARES		**4,322,958,135**	**100.00%**	**100.00%**
Intersalt, S. de R.L. de C.V.	Series V	2,847,000,000	66.81%	**66.81%**
	Series C	0		
Public Float	Series V	1,414,064,135	33.19%	**33.19%**
	Series C	0		
TOTAL	***Series V***	***4,261,064,135***	***100.00%***	***100.00%***
	Series C	***0***		
***** Data Annual Rep 05***		***31/12/2005***		

SHARE OWNERSHIP STRUCTURE 2004				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series V Shares *(no par value)*		**4,316,653,121**	98.78%	**100.00%**
Series C Shares *(no par value)*		**0**	0.00%	0.00%
Share-option personnel scheme		53,521,611	1.22%	0.00%
TOTAL SHARES		**4,370,174,732**	**98.78%**	**100.00%**
Intersalt, S. de R.L. de C.V.	Series V	2,803,000,000	64.93%	**64.93%**
	Series C	0		
Public Float	Series V	1,513,653,121	35.07%	**35.07%**
	Series C	0		
TOTAL	***Series V***	***4,316,653,121***	***100.00%***	***100.00%***
	Series C	***0***		
***** Data Annual Rep 04***		***31/12/2004***		

WAL*MART DE MEXICO, S.A.B. DE C.V.

SHARE OWNERSHIP STRUCTURE 2003				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series V Shares *(no par value)*		**3,909,124,724**	88.18%	**100.00%**
Series C Shares *(no par value)*		**461,768,271**	10.42%	0.00%
Share-option personnel scheme		62,011,850	1.40%	0.00%
TOTAL SHARES		**4,432,904,845**	**100.00%**	**100.00%**
Intersalt, S. de R.L. de C.V.	Series V	2,730,000,000	63.28%	**69.84%**
	Series C	36,000,000		
Public Float	Series V	1,179,124,724	36.72%	**30.16%**
	Series C	425,768,271		
TOTAL	***Series V***	***3,909,124,724***	***100.00%***	***100.00%***
	Series C	***461,768,271***		
***** Data Annual Rep 03***		***31/12/2003***		

SHARE OWNERSHIP STRUCTURE 2002				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series V Shares *(no par value)*		**3,909,124,724**	87.61%	**100.00%**
Series C Shares *(no par value)*		**489,532,671**	10.97%	0.00%
Share-option personnel scheme		63,246,450	1.42%	0.00%
TOTAL SHARES		**4,461,903,845**	**100.00%**	**100.00%**
Intersalt, S. de R.L. de C.V.	Series V	2,730,000,000	62.88%	**69.84%**
	Series C	36,000,000		
Public Float	Series V	1,179,124,724	37.12%	**30.16%**
	Series C	453,532,671		
TOTAL	***Series V***	***3,909,124,724***	***100.00%***	***100.00%***
	Series C	***489,532,671***		
***** Data Annual Rep 02***		***31/12/2002***		

SHARE OWNERSHIP STRUCTURE 2001				
Class of Shares		*no. shares*	*Percentage Capital*	*Percentage REAL Voting*
Series V Shares *(no par value)*		**3,909,124,724**	87.97%	**100.00%**
Series C Shares *(no par value)*		**483,682,593**	10.88%	0.00%
Share-option personnel scheme		51,050,781	1.15%	0.00%
TOTAL SHARES		**4,443,858,098**	**100.00%**	**100.00%**
Intersalt, S. de R.L. de C.V.	Series V	2,729,806,612	62.14%	**69.83%**
	Series C	0		
Public Float	Series V	1,179,318,112	37.86%	**30.17%**
	Series C	483,682,593		
TOTAL	***Series V***	***3,909,124,724***	***100.00%***	***100.00%***
	Series C	***483,682,593***		
***** Data Annual Rep 01***		***31/12/2001***		